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A Weekly Record of Progress in Plumbing, Heating, Ventilation and all Matters Pertaining to Domestic Sanitation

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Address all Correspondence to Chicago Office.
Long Distance Telephone: Harrison 2400.

Eastern Office, 200 Fifth Ave., New York City. Tel. Gramercy 4419.
F. S. Kenfield, Pres. F. P. Keeney, Treas. and Gen. Mgr.
E. De Forest Winslow, Vice-Pres. O. T. Carson, Secretary.

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THINKERS AND TINKERS.

THAT there are both "thinkers and tinkers" in practically every craft, and that the plumbing business is no exception to this rule, was the contention of a delegate speaking at the recent convention of the Indiana Society of Sanitary Engineers.

The existence of "tinkers," as well as "thinkers," in the trade is a well known fact, and the problem of the latter type of business men has been: How shall we make thinkers out of the tinkers?

It has been truthfully said, that the poor are always with us. The same observation can be applied to the "tinkers." The aim, today, with regard to this species of craftsmen, is not how to eliminate them, but rather how to reduce their number.

Reducing their number by educational processes has been going on steadily for some years, and in this work the state associations of master plumbers and the trade press have been largely instrumental in accomplishing excellent results.

It has been found, however, that as soon as you have educated a certain percentage of "tinkers" to become "thinkers" in business, you are confronted by another certain percentage of "tinkers" who have sprung into existence to replace those who have graduated from the "tinker" class.

Thus, one is reminded of the story about the old scheme to colonize in Africa a large part of the Southern negroes, as an antidote for the rapidly increasing colored population following the civil war. It was demonstrated, however, that as soon as a certain percentage of blacks had been shipped to Africa, an equally large percentage had just been born in Dixie. Here was indeed a problem. The solution suggested by some Southerners, at the time, was: "Keep on shipping 'em."

A similiar scheme of meeting the problem of the rapidly increasing percentage of "tinkers" is no doubt in order. "Keep on educating 'em." This would seem to be the only method of handling the question.

In the plumbing and heating trades, there are men who began as "tinkers," but who, fortunately for themselves, did not continue as such. They awoke to realize that a "tinker's" life was little better than a dog's life, a hand-to-mouth existence.

Those, who have thus begun their careers as mere "tinkers," have saved themselves from the usual fate of this type of craftsmen by becoming "thinkers," adopting better business methods, affiliating themselves with business organizations, studying the trade papers, etc.

Some of the men of the progressive and legitimate trades have proposed various schemes of legislating "tinkers" out of business on the theory that they are incompetent (which is true) and that they are a sort of menace to healthy competition (which is also true).

Upon second thought, it will be seen that there is really no need of adopting legislative measures as a means of exterminating the tinkering mechanic, who trespasses on the domain of the regular contractor. The "tinker" automatically exterminates himself. By the very nature of his methods he is doomed to dig his own grave. Others may take his place, follow his unprofitable tactics, but like moths around a flame they exist for a time and then perish.

The Heating, Ventilation and Plumbing of a Mausoleum

Notes on the Installation of Heating, Ventilating and Plumbing Systems in the Proposed Mausoleum in Forest Hill Cemetery, Kansas City, Mo.

By THE ENGINEER

THE Forest Hill Pantheon or Mausoleum, to be erected in Forest Hill Cemetery, at Kansas City, Mo., will be circular in shape with a diameter of 104 feet. The dome will rise 89 feet above the floor of the chamber of catacombs. The walls will be constructed of reinforced concrete; the exterior will be of white Colorado-Yule marble, and the interior will be of the same material, highly polished. The doors will be of bronze, and the building from foundation to dome will be absolutely fire proof.

There will be three floors, one composed chiefly of tombs for individual entombment, and the other two of private chambers for families, with de luxe sections and a few individual tombs. The funeral chapel is located in the center of the building beneath the dome, with its entrance directly across the corridor from the outer door of the Pantheon.

The domed ceiling of the chapel is fifty feet high and will be lighted by the indirect method. A large fifty-light pendant or chandelier will be suspended from the center of the dome.

The corridors, lobbies and vestibules are to be lighted by semi-indirect fixtures controlled from D. P. switches.

Mausoleum in Forest Hill Cemetery, Kansas City, Mo.

The building is to be heated by means of direct steam radiation. The steam will be generated in a brick set, fire-box boiler, located in the basement. The system of heating will be a two-pipe or return line vacuum system. The vacuum will be created by means of a motor-driven vacuum pump. A system of automatic temperature control will be used throughout the building.

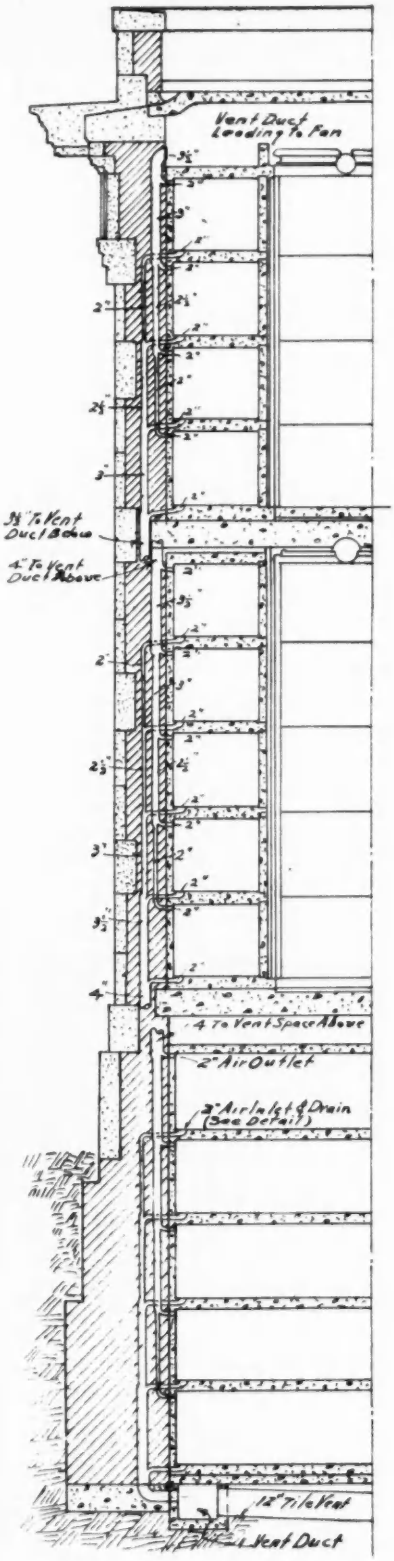
The radiators will be cast iron of the hot water type, and those located in the chapel and main corridors will be recessed back of solid bronze grills. These grills will be of special design and so arranged by means of hinges and latches, that easy access may be had to the radiator and valves.

As it is not desirable to have coal in the building or to burn same on account of the dust, smoke, etc., the boilers will be equipped for burning fuel oil. The system will consist of oil burner, oil pump, air compressor and all necessary oil and air piping; there will also be provided a super-heating loop or coil in the fire-box of the boiler connected to the cold water supply and so arranged that oil can be atomized by steam in place of air after steam has been raised on the boiler.

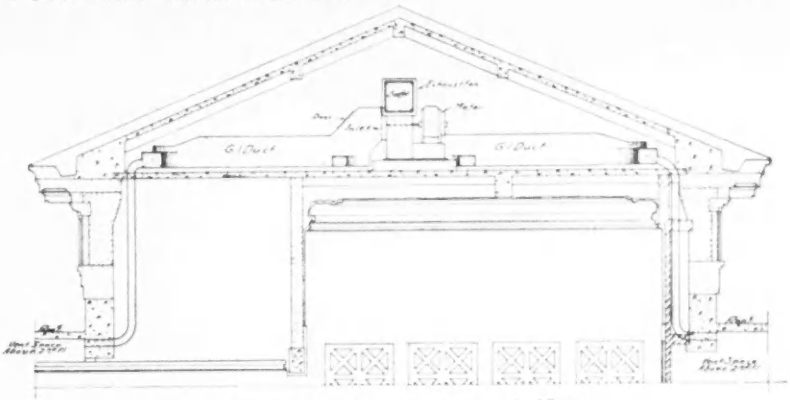
The air compressor will be 2½ by 3 inches, operated by a back-geared or direct-connected, 1¼ h. p. motor. The oil pump will be 1 by 2 inches and operated by means of a back-geared or direct-connected, ¼ h. p motor. Fuel oil will be stored in a steel cylindrical tank, 20 ft. in length and 6 ft. in diameter, buried four ft. below the surface of the ground outside of the building. The tank will be filled by means of a 3-inch pipe connected to a cast iron filling box located in the street about 100 ft. distant.

The ventilation of the building is rather unique and difficult to design. The form of the building, however, readily lent itself to the system used, which was the exhaust system. The air is brought into the building through 13 12-inch tiles. As it was not desirable to make these air inlets conspicuous, one is located in the center of each of the 13 sides of the building. A bronze grill is to be set in flush with the marble wall and full size of the bell of the 12-inch tile. The supply of air is controlled by means of copper damper blades held in position by set screws.

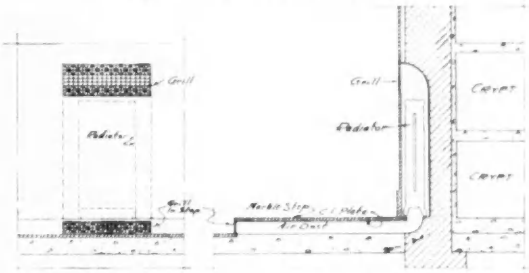
The air intake tiles are connected to a concrete trench or duct located just inside of the footings and under the main floor of the Catacomb level. From this duct air is furnished to all crypts located on the exterior walls, and to the crypts on the interior by means of 12-inch tiles connecting to a duct at the base of the interior or main dome wall. Each crypt is to be provided with a 2-inch air inlet and a 2-inch air outlet pipe connection. The inlet pipes are branched from main air risers and enter the crypt at the bottom or in the floor and are finished with a specially designed connection which forms a drain. The air outlet or vent enters the crypt at the top and is a branch from a main riser connecting to the main vent ducts formed by roof slab and ceiling of second floor. It is the intention to use H. W. Johns-



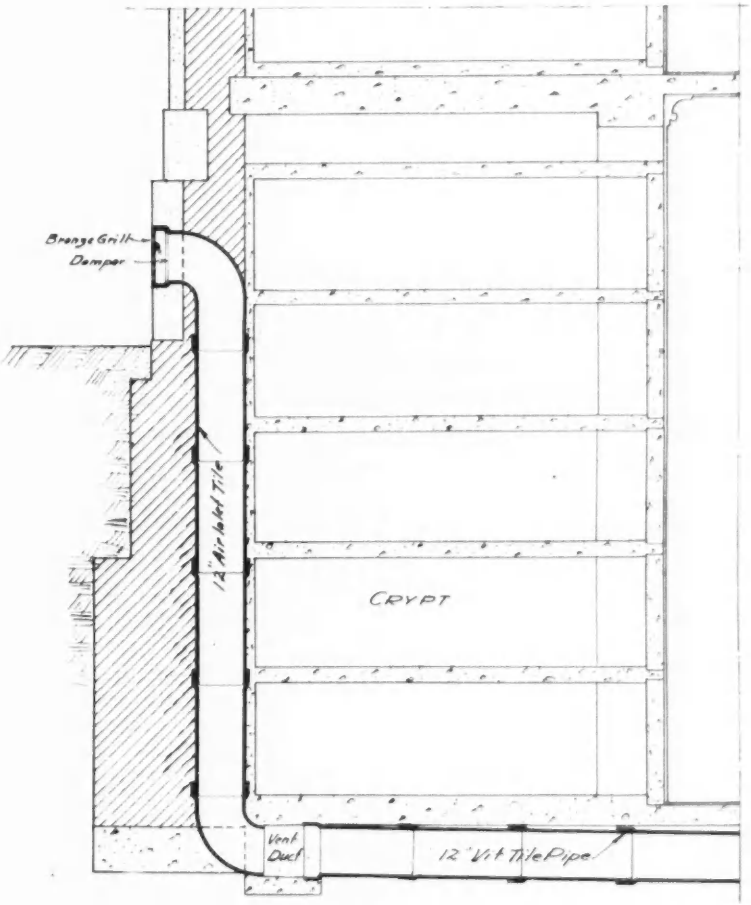
TYPICAL DETAIL SHOWING VENT, DRAIN AND AIR SUPPLY PIPES.



CROSS SECTION THRU ATTIC SHOWING FAN & DUCTS



ELEVATION CROSS SECTION



SECTION THRU AIR INLET PIPE

Plans showing some of the Details of the Heating, Ventilatin g and Plumbing Systems in the Mausoleum in Forest Hill Cemetery, Kansas City, Mo.

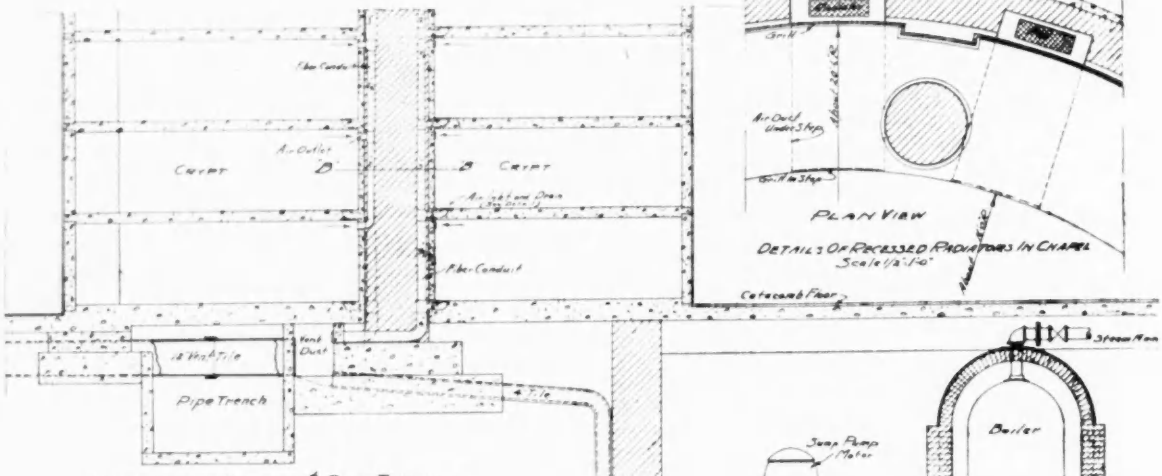
Manville fiber conduit for the air supply and vent risers. These risers will not be larger than 4 inches in diameter and will be securely anchored in chases in the walls and then embedded in concrete.

The main air vent ducts will be connected to an exhaust fan located in the attic above the main lobby of the second floor. A multiblade type of exhauster will be used; it will be capable of delivering 4,800 cubic feet of air per minute when running at a speed of 570 r. p. m. with a ½-inch static pressure. The fan will be operated by a direct connected 2½ h. p. motor.

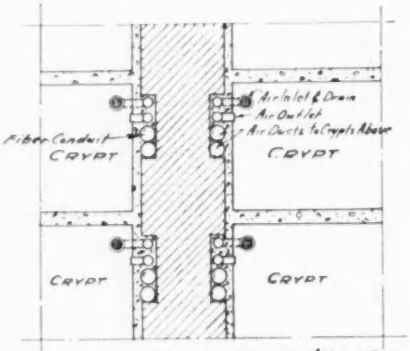
The fan discharge will be connected to by means of a galvanized iron duct to copper outlet louvers.

Each crypt is to be drained through the pipe which supplies air to the same. The plumbing consists of one anti-freezing water closet and three slop sinks, which are drained to a sump in the basement, from which all soil and waste is pumped by means of an automatic sump pump to a septic tank located outside the building. The overflow from the septic tank is connected to sub-soil drainage pipes which are laid with loose joints in broken stone.

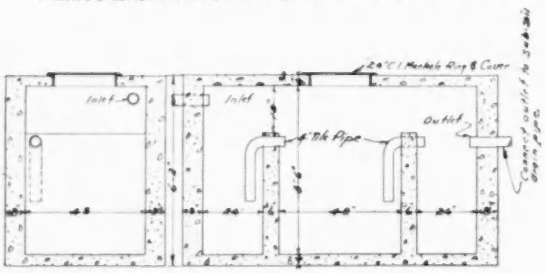
The mausoleum was designed by Architect James Oliver Hogg, of Kansas City, Mo., who was assisted in the mechanical work by Walter E. Gillham, consulting engineer.



SECTION THRU CRYPTS & PIPE TRENCH

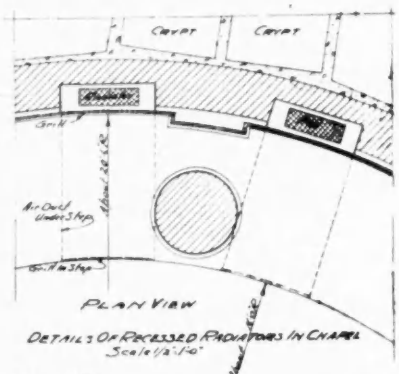


PLAN VIEW SHOWING SUPPLY & VENT PIPES FOR CRYPTS

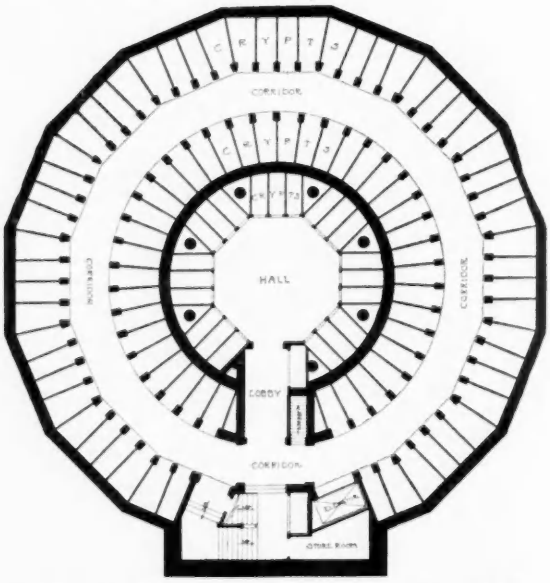


CROSS SECTION LONGITUDINAL SECTION

DETAILS OF SEPTIC TANK



Sectional View of Boiler and Sump.



Plan of Catacomb Floor showing Shape of Mausoleum.

The Value of Angle and Cross Valves in Steam and Hot Water Heating

By W. H. WAKEMAN

Continued from Page 352 in the March 10th Issue.

Fig. 10 shows an end view of the main header in a steam plant, resting on rollers to permit it to expand and contract without injury. The small angle valve controls the supply to the steam gage in the engine room. As this gage is nearly always on a lower level than the header, there will be less pressure in the boilers than the gage indicates. As this is on the safe side it may be ignored, but where a close calculation is desired, the difference in level, expressed in feet may be multiplied by .43 and the product is the difference in pounds.

The 6-inch angle outlet valve is similar to Fig. 9, except that it occupies a different position, therefore the same remarks apply to it.

Fig. 11 illustrates an angle throttle valve on one of my engines. It may appear to the casual observer, as if it was no better than a globe valve, but the passage through it is designed to produce less friction of the steam in motion, and this is a valuable feature.

The drip valve from the separator is of the angle type, and is convenient accordingly. There is also an angle valve above the lubricator.

Fig. 12 is an angle valve on another engine in my plant. The design is peculiar, owing to the odd style of the engine. The offset just above it is necessary in order to

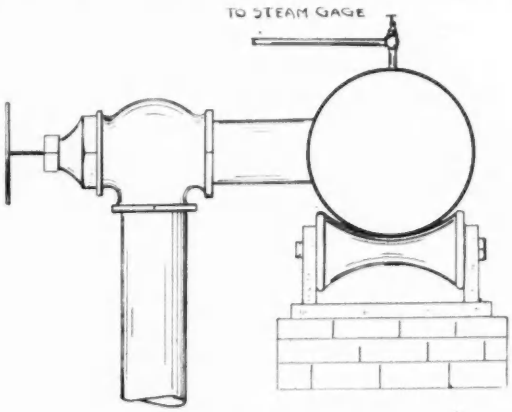


Fig. 10.

allow room for the governor balls to revolve. The lubricator is shown at a right angle to its true position, therefore it appears as if the governor balls would hit it, but this is not the case in practice. It is presented in this position to show the small angle valve at the lower part of the condenser column, in contrast to Fig. 11, where it is found at the top.

Fig. 13 is a motor-driven power pump. It takes in water through the large suction pipe at the lower left hand side, and discharges it through the upper pipe, according to common practice. One outlet from this pipe discharges water toward the right hand through a tee, the upper outlet of which is connected by a short nipple to an angle valve. When this is barely raised from its seat, water is discharged into the suction pipe, and circulates through the pump again. This pump is driven by an alternating current motor, hence the speed is constant. By allowing a part of the water delivered by the pump to go into the suction pipe, the effective capacity of it can

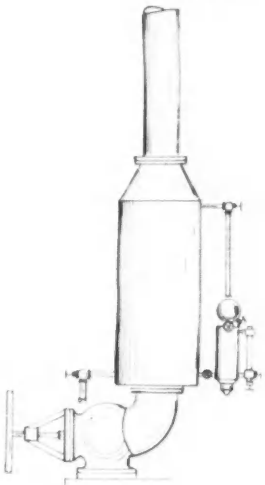


Fig. 11.

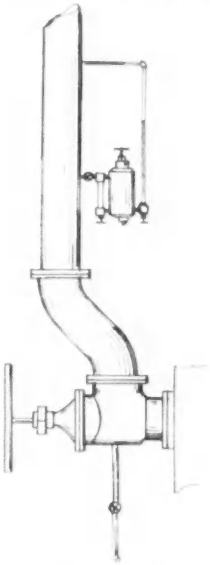


Fig. 12.

be regulated at pleasure. This angle valve controls what is commonly called a by-pass, and the illustration gives the comparative sizes of pipes correctly, but the by-pass is too large for practical results. If the suction is 2½ or

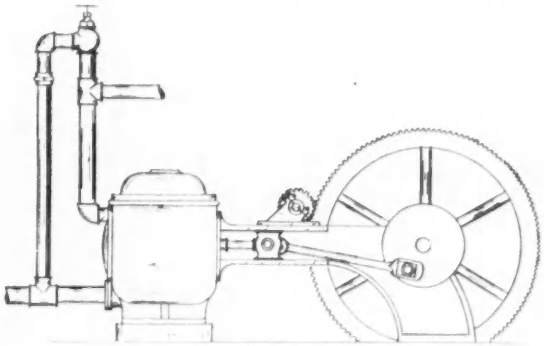


Fig. 13.

3 inches and the discharge pipe 2 inches the by-pass ought to be ¾-inch.

Fig. 14 illustrates the piping of one pump in the plant. Steam enters through the globe valve at the right hand and, after driving the pump pistons, is exhausted through the angle valve. This valve adds no more friction to the

line than would result from the use of an ell at this point, yet it is very convenient to have the valve, because the exhaust steam is discharged into a heating system under light pressure. When it is necessary to adjust or pack the pump, the angle valve can be closed for this purpose. In the same exhaust line an angle check valve is shown. As indicated by the broken pipes, this

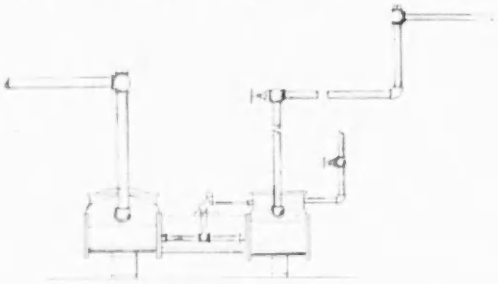


Fig. 14.

check valve is a long distance from the pump. To be more explicit, it is in another building, where it cannot be reached from the pump, hence if any kind of a valve is used, it must be automatic. By placing a check valve here, the exhaust pipe is kept free from water that otherwise would collect when the pump is not running. It may not do any especial harm to have a long exhaust pipe filled with water when starting a pump, but it seems much better to have it empty.

This pump takes water from a receiver that is not shown, but the discharge pipe is illustrated with an angle check valve at the first change of direction. In common practice an ell would be used here, followed by a nipple a few inches long, then a globe, or a swing check valve, but the angle valve is better. It saves one fitting and two threads. Water passes through it freely, as there are no small and crooked passages to cause unnecessary friction. Some kinds of globe check valves cause so much friction when used in feed pipe lines that it is necessary to use one size larger than the pipe and bush it at both ends, but this does not make a neat job.

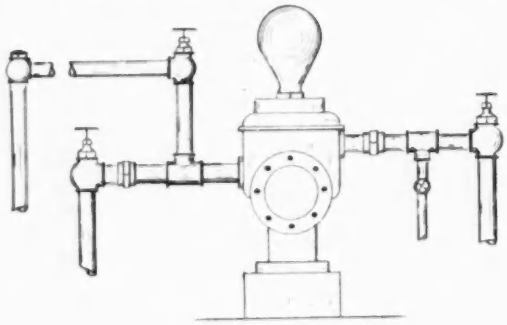


Fig. 15.

Fig. 15 is an end view of a cold water pump in my engine room. It is used for feeding boilers in the summer season, when no hot water is coming back from the heating systems. The supply pipe which delivers water under pressure from the street mains, is laid under the floor. An ell turns it upward and it is discharged through the lower angle valve, at the left hand, to the pump cylinder. Between these two points a tee is used with a nipple in the upper outlet, followed by another angle valve. This forms part of a suction pipe line that draws water from a tank. There is an angle check valve in this line that prevents water from flowing into the tank, when the other valve is open.

Water is discharged from this pump through pipes shown at the right hand. The first outlet is controlled by a globe valve. It supplies a hose for washing windows, etc. The outlet to the boilers is controlled by an angle valve as shown, and the pipe is carried directly down through the floor. The whole job presents a neat and workmanlike appearance. The pump and valves are located in the engine room, because it is not difficult to keep them clean when they are not exposed to dust and dirt from the boiler furnaces.

Fig. 16 illustrates the discharge pipe from a pair of duplex pumps. The outlet from each pump is controlled by an angle valve. A cross is located between them, and a swing check valve is above this cross. It is sufficient for both pumps, and is satisfactory in practice. A gate valve is next in the line, hence the check valve can be cleaned or repaired without draining water out of the feed pipe, which is long, as it supplies six boilers.

Fig. 17 shows an inspirator with connecting pipes and valves. An end view of the main steam supply pipe is

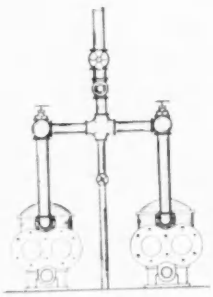


Fig. 16.

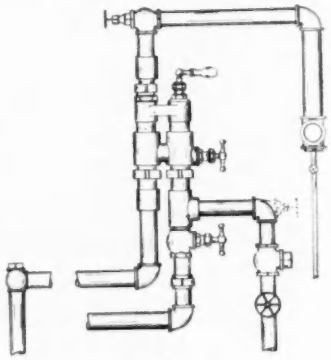


Fig. 17.

shown at the right hand, with a small drip pipe which discharges under the floor. Although this drip is an absolute necessity, its value is not always understood by engineers, as they always try to start the inspirator without drawing the accumulated water out of the steam pipe.

When attempting to start an injector of any kind (an inspirator is one type of double tube injector), two principles in natural philosophy should always be remembered. First: Water will always collect in an unused steam pipe, unless measures are taken to prevent it. Secondly: An injector requires dry steam for its operation, hence it is useless to attempt to use it with hot water under pressure. In the illustration a vertical riser from the main steam pipe is followed by a reducing ell, which is much better than to use a regular ell with a bushing in the outlet. There is one less joint to make and keep tight, and the ell is smaller. A short horizontal pipe comes next, followed by an angle valve, making a neat job. When this valve is closed, no pressure is on the stem, hence the stuffing box can be packed at any convenient time, without shutting steam off from the whole line. However, it can be shut off when this angle valve begins to leak, and a new disk put in. If it still leaks, the bonnet can be removed and a valve file used to make the seat true, then the valve is made entirely new, so far as the service parts are concerned.

This angle valve is located so that a valve file can be inserted and the brace turned rapidly, thus proving much more convenient than where it is necessary to use the

ratchet attachment. As a general rule, whenever an angle valve can be used it is located naturally, so that a valve file can be applied to advantage. This is another reason for adopting this kind of a valve.

The suction pipe at the left hand of this contains an angle check valve, which prevents water from flowing back in case the inspirator stops working. Water from the street mains flows into this tank, and is controlled by a float valve, which maintains a water level that is so nearly constant that it answers every purpose. A small pipe discharges water into the suction pipe of this injector, therefore if the piping becomes overheated by steam leaking through it, cold water can be sent through the parts without spilling it on the floor.

The overflow goes back into the tank, so that none is lost on this account. The discharge pipe is shown at the right hand. An ell is used at the first turn, with the bonnet of an angle valve in dotted lines. This is presented in order to show what might have been installed. It was not so arranged, because the valve belongs below the check valve as shown. The use of a check valve in a vertical pipe, where water must flow downward through it, is not recommended, because it will not always prove satisfactory. When water flows rapidly backward through it, the valve will close, but it will hang open where only a small quantity comes, and consequently is useless.

(To be continued.)

Questions and Answers

A NOISY STEAM HEATING SYSTEM.

Editor "Domestic Engineering": The accompanying sketch, Fig. 1, shows the layout of a steam heating plant, which we have installed in a school building. There is one radiator that seems to knock a great deal and fill up with water. We cannot understand why this is so, because the main has a good fall, the air valve on the radiator works perfectly and the riser from the main is graded right.

When the steam pressure is raised to five pounds at the boiler, water will escape from the air valve on the end of the steam main.

We would like to know what the trouble is.

Orleans, Ind. M. R. C.

Answering the above communication we reproduce the sketch submitted as we understand it. The manner of connecting the 2½-inch main to 6-inch header on the boiler is not quite clear to us; the main (2½ inch) seems ample in size to supply the radiation connected to it. We do not like the idea of reducing with eccentric reducer at point shown, as the friction caused by this reduction adds to the pressure drop at the end of the dry return and raises the point (height), where the pressure is equalized. The length of the 2½-inch main and the 1½ inch dry return not being given, we cannot figure the approximate pressure drop, but it is possible that it is so great that the water in the return stands so high as to flood the 1½-inch pipe and back up in the main to the tee supplying the radiator, which is giving trouble. It is best to run the main full size to point, where air valve is shown, and at this point use a 2½x1½-inch reducing elbow tapped for the air valve. This is the only correction we have to offer with regard to the piping.

We notice by reference to the sketch submitted that a check valve has been placed on the return before connecting same with the boiler. A check valve installed in this manner on a low pressure gravity steam job is not only useless but frequently is the cause of trouble. Many steam fitters having trouble from water in the main or radiators believe that the pressure on the boiler backs the water out of it through the return. This belief is a fallacy. If a pipe was connected to the return opening of the boiler and then extended vertically with the upper end open to the atmosphere, the pressure on the boiler will lift the water in this pipe a certain distance, according to the pressure carried on the boiler, the lift being about 2 ft. for each pound of pressure. Connect the upper end of this pipe to a main or dry return, which carries a pressure equal to that on the boiler less the frictional resistance of the fittings on the main and the length of it, and the point on the vertical drop where the pressure is equalized is not far above the water line.

Supposing that the pressure on the boiler is five pounds and that there is a pressure drop of eight ounces or one-half pound at the end of the main or dry return, the water in the vertical drop will stand approximately 12 inches above the water line of the boiler. In addition to this a slight height—say 3 or 4 inches—is required to provide the extra pressure necessary to return the condensation to the boiler.

If the pressure is unequal and the fitter has installed the check valve to overcome the trouble, the water must stand in the return at a sufficient height to operate the check in addition to the height required to equalize the pressure. It may be that so simple a matter as the removal of the check valve will in this instance cure the trouble. It's worth trying.

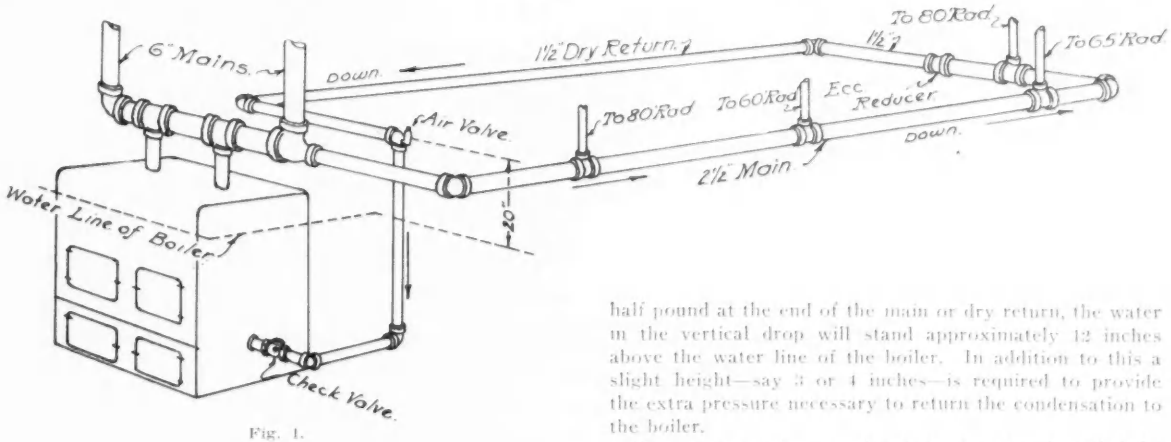


Fig. 1.

THE PLACE TO CONNECT FURNACE COIL AND LAUNDRY HEATER FLOW PIPES TO RANGE BOILERS.

Editor "Domestic Engineering":—In the "Questions and Answers," on page 80, in the January 20th issue of "Domestic Engineering," S. W., of Nelson, Neb., asked for information about three range boilers in the same house and the proper way of installing them.

Will you kindly tell me if it would be practicable to connect the upper circulating pipes on both the laundry stove and the furnace into the boilers at the top instead of at the side? Would this help to obtain hot water quicker than the way shown?

Shawmut, Mass. A. H. T.

The plan referred to by Mr. "T," is shown in Fig. 1. Here the hot water flow pipe from the furnace coil is disconnected from the side connection of the boiler and connected to top of boiler; also flow pipe from laundry stove is disconnected from side tap of boiler and connected to the top, otherwise the system is the same as illustrated in January 20th issue of "Domestic Engineering," page 81.

Mr. "T" is correct in suggesting that hot water can be heated more rapidly when the connection is made to top of boiler, because it does not have to mix with and thereby be cooled by the cold water in boiler. But he must be careful in making such a connection. For example, in this particular case he would have to drop down with a nipple on top of boiler, thereby making an air trap in the hot water flow pipe as shown in Fig. 2. This air trap separates the water in the boiler from the water in the flow pipe and consequently stops circulation and allows steam to be produced in the coil or heater which is not considered good engineering. The circulation pipes should be free from air pockets.

Of course the connection can be made in the side of the nipple A in Fig. 1, as shown by dotted lines. But this is not a good connection here, for in a measure it would short circuit the lower boilers, causing the hot water from furnace and laundry stove to flow directly up through pipe B and overheat the upper boiler. We consider it advisable to connect the furnace and laundry stove in this particular case to the side tappings, provided that an upward pitch of at least one foot can be obtained for them.

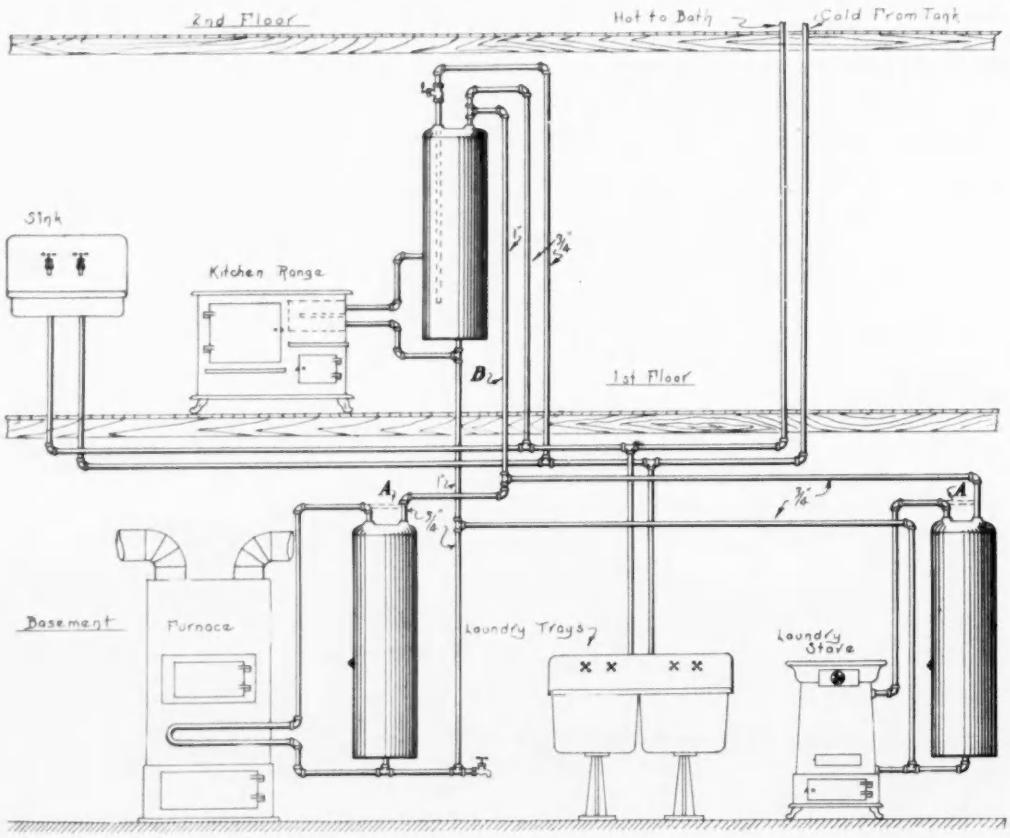


Fig. 1.

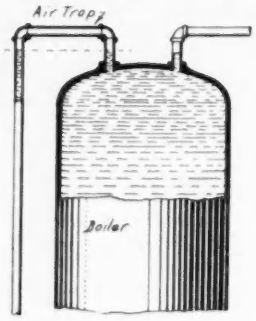


Fig. 2.

What the Law Decides.

By a decision of the Alabama Supreme Court, handed down recently, water consumers in Birmingham must pay for their installations themselves. The court held that the franchise did not require the company to make connections and plumbing contractors, therefore, will be paid for this work by the owner.

New York State Master Plumbers' Convention

The Twenty-Ninth Annual Convention of the New York State Association of Master Plumbers, Held in Albany, an Interesting and Instructive Meeting

THE twenty-ninth annual convention of the New York State Association of Master Plumbers was held under most favorable conditions in point of attendance and enthusiasm at Albany, New York, on Tuesday and Wednesday, March 13th and 14th.

Headquarters were established at the Hotel Ten Eyck, Albany's leading hostelry, where the first day's sessions were held. Wednesday's sessions, through the courtesy of Past-President John Moran were held at Moran Hall.

Tuesday Morning.

The convention was opened at 11:00 o'clock Tuesday morning by President Thomas F. Nolan, of Albany.

The first number on the program, following Mr. Nolan's opening remarks, was the address of Mayor Joseph W. Stevens. His presentation of the key of the city was to have been a spectacular event, but Mr. Nolan didn't pull hard enough. Probably his strenuous hand-shaking ordeal at the reception of delegates Monday evening left him "hors de combat," as far as his right hand was concerned. However, the humor in John Moran's trick, two-piece key was informally staged later in the session.

A hearty welcome was extended by the mayor, who was enthusiastically received by the delegates.

Under the regular form of business, J. O. Stapf and W. F. Cassidy, both of Albany, were appointed sergeants-at-arms.

The customary assembly of past-presidents was conducted by the chairman at this point. There was probably a greater number of these former administrative heads on hand than at any previous meeting, and the newer members in attendance were afforded an unusually interesting and enlightening review of the association's activities in the past.

The trend of thought in the remarks of these members of the "old guard" was loyalty to the association and the nation. In the assembly were: Past National President Frank J. Fee, of New York, and the following past presidents: James Creelman, Rochester; Jonas A. Rossman, New York; Horace F. Westcott, Albany; B. F. Donohoe, New York; John E. Dugan, Albany; Frank B. Lasette, New York; I. J. Brown, New York; Fred E. Fladd, Rochester; John H. Moran, Albany; Geo. L. Brucker, Utica, and Thos. E. O'Brien, Brooklyn.

Thomas O'Malley, president of the Albany local, supplemented the mayor's address with a welcome on behalf of the Albany plumbers.

Temporary committees appointed at this time were:

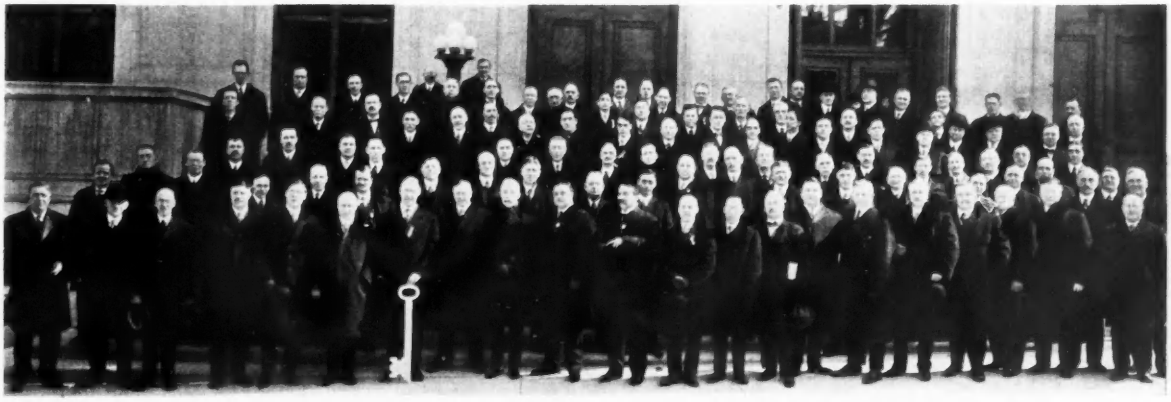
Credentials: Louis Yauchzi, Rochester; E. B. Dunkerton, Syracuse, and W. F. McCahill, Nassau County.

Resolutions: J. L. Murphy, New York; G. T. Morris, Troy, and W. J. Flynn, New York.

Auditing: Geo. H. Drake, Buffalo; Jos. Nicklas, Albany, and George Cropper, Binghamton.

Press: John E. Dugan and C. S. Keeshan, both of Albany.

Just before roll call, Mr. O'Malley presented to President Nolan a handsome solid ivory gavel on behalf of his Albany colleagues.



Delegates and Guests at the 29th Annual Convention of the New York State Association of Master Plumbers, at Albany N. Y., March 13 and 14, 1917.

Inscribed on a silver plate attached, was the following: "Presented to Thomas F. Nolan, President of the New York State Association of Master Plumbers, by the Albany Master Plumbers' Association. Albany, N. Y., March 13-14, 1917."

A long discussion followed the announcement by T. E. Kerwin, of Albany, that a Senate committee hearing on the proposed Sullivan law amendment, known as bill 1145, was to be held that day at the state house.

The purpose of the bill is to permit the letting of subcontract work, such as plumbing and heating on government operations, along with the general contract, in New York City only, and only on jobs not in excess of $1,000.

This bill, if passed, would defeat, in some measure, the very purpose of the Sullivan law for which the plumbers had fought long and hard.

The discussion resulted in the appointment of a committee to represent the association at the hearing, and present the plumbers' case before the Senate Committee.

The committee was composed of T. E. Kerwin, chairman; W. J. Flynn, J. L. Murphy, F. B. Lasette, F. J. Fee, I. J. Brown, John J. Hannigan, John Hopkin, Fred E.

Fladd, Geo. H. Drake, Thomas E. O'Brien and M. J. Kennedy.

The convention recessed at 1:00 o'clock.

Tuesday Afternoon.

When the meeting re-assembled at 3:15 o'clock, J. Edward James, the association's first vice-president, was introduced. Mr. James is now a prosperous farmer at Ra-

Delegates from New York City attending the Master Plumbers' Convention in Albany.

vena. It was recalled that he refused the presidency at the second convention.

The report of the Sanitary Committee, presented by Harry J. Bareham, of Rochester, recommended that local associations put forth all efforts to secure a rigid enforcement of the state statutes in relation to inspection and supervision of plumbing. The situation in Oneida in this respect was brought before the convention. It seems that the local authorities there refuse to comply with the law on the ground that there is no money available for the purpose. The attorney-general's attention was invited and action from his office is now going forward.

A supplementary report of the Sanitary Committee, reviewing the work done in the establishment of the state industrial code, was also read, which was received with thanks along with the original report.

T. E. Kerwin, chairman of the Legislative Committee, reviewed in detail the work of the past year stating that eight legislative matters were given attention and the committee had successfully defended or opposed each measure. He also brought the good word that he was confident bill 1145 would be defeated. This announcement also constituted the report of the committee of twelve sent to the senate hearing. The thanks of the convention were extended to Mr. Kerwin and his associates.

The Apprenticeship Committee in a brief report deplored the absence of systematic tuition in the trade and recommended the immediate formulation of plans for improving the situation.

Frank J. Fee pointed out that in the old system the employer was able to mold the character of the boy as well as instruct him in the mechanical arts. He said he hoped the members would take greater interest in the apprentice hereafter and encourage him to attend the night classes.

W. J. Flynn asked for a thorough discussion and consideration of the matter and said the boy who should have the educational benefit of the training schools is the one who is working at the trade. In the present system the principles in the manual training classes virtually dictates the trade instruction of the children with the result that many times the children are instructed in a trade which they later decide not to follow.

Mr. Drake told how the Buffalo Association is cooperating with the industrial schools, by sending the boys to the school one day a week and paying them for it. Mr. Hannigan pleaded for the continuation of the helper system.

The session closed at 5:30 o'clock.

Wednesday Morning.

The Wednesday morning session was called to order at 11:30 o'clock in Moran Hall on Hudson Avenue, named after Past President John Moran, its owner. Secretary James H. Doody's report showed a net loss of twenty-two members during 1916. The financial statement showed a balance on hand of $665.98. This agreed with the report of Charles Campbell, treasurer.

After a thorough discussion the convention unanimously adopted resolutions approving of the new National Association by-laws as revised by the National Committee. The presentation of an invitation from the Merchant's Association of New York City, to hold the next convention in that city, upon which no action was taken, closed the session at a late hour.

Wednesday Afternoon.

President Nolan opened the final session of the convention at 4:00 o'clock Wednesday afternoon with the reading of his report. He mentioned with feeling the demise of P. C. Doherty, of Poughkeepsie; Mr. Doyle, of Albany, and William McDermott, of New York. He complimented the new Nassau County local, which had been organized since the last convention, with a membership of fifty-three, and he paid tribute to T. E. Kerwin, of Albany, for his invaluable work on the legislative committee. In the matter of finances, he said, the administration was fortunate in having been able to reduce the amount of unpaid dues from $1,500 to $400.

The report was received with the thanks of the convention.

The importance and stability of the Plumbers' Mutual Indemnity Co., organization of which has been completed with a number of prominent association members of the state as directors, was brought before the members by Geo. H. Drake, of Buffalo. This is the new mutual company organized by and for the plumbers to carry liability insurance.

Mr. Trimble, president of the company, also spoke on the subject answering questions from the platform for the benefit of the members. Thos. E. O'Brien, in a brief talk on what has been attempted in New York, made a plea for the appointment of a committee on ways and

The Brooklyn Delegation at the New York Master Plumbers' Convention in Albany.

means to take up the matter of devising some method by which the trade may get back its constitutional right to trade protection. Discussion by Mr. Flynn and several other members followed, but no definite action was taken.

Election of Officers.

The orators of the association made the hall ring when the time came to select a chairman for the 1917-18 season. One after another arose each trying to outdo his predece-

sors in eulogizing J. L. Murphy, of New York, who had served as vice-chairman during the year just closed.

Further selections followed in rapid succession and the cabinet as elected for the ensuing year is as follows:

President, J. L. Murphy, New York; vice-president, Geo. H. Drake, Buffalo; secretary, I. J. Brown, New York; treasurer, Charles Campbell, Watertown; directors, P. D. McCarthy, Syracuse; J. H. Doody, Albany; Chas. Breen, Utica; H. J. Bareham, Rochester; S. H. Welch, New York, and J. F. Rogers, Flushing.

The appreciation for the favors and attention shown the convention from many quarters was well taken care of in hearty expressions of thanks.

Resolutions.

Among resolutions adopted by the convention was the following, introduced by Frank B. Lasette of New York:

"The association does hereby unanimously pledge the support of all the members of this association to the United States Government and the President, the Honorable Woodrow Wilson, in any act to maintain the foundation upon which these United States were founded."

Another indorsed the Plumbers' Mutual Indemnity Co.

In a third resolution adopted, the incoming executive board is instructed to district the entire state and so provide for the election of one delegate-at-large from each district at future elections. This arrangement is to insure a wider representation on the excutive board. The selection of a place for holding the next convention was referred to the executive board.

The convention closed at 7:00 o'clock.

Entertainment.

The plumbers of the capital city did themselves proud, when it came to entertainment of the delegates.

Monday was given over to a general reception at the Ten Eyck.

Tuesday evening the plumbers took possession of the Empire Theatre as guests of their local friends, while on Wednesday evening a banquet, such as only Albany knows how to provide, was staged at the hotel. An unusual program of interesting speachmaking, including several prominent and gifted lawmakers from the capital, followed an excellent menu. The banquet was in honor of retiring President Thomas F. Nolan, and with him at the head table were Director James H. Doody, President J. L. Murphy, Senator J. J. Walker, Dr. L. R. Williams,

The Rochester Delegation at the New York State Convention in Albany.

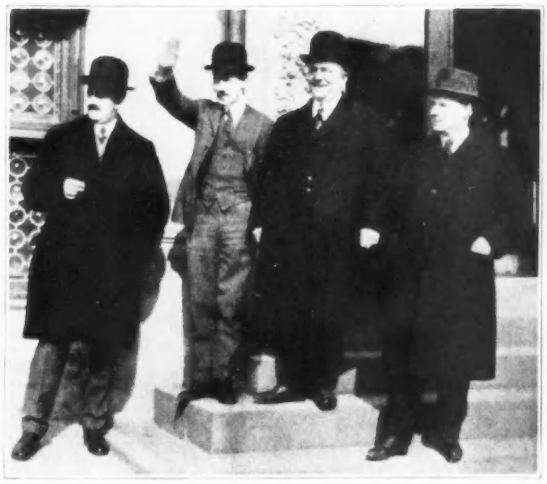
Thos. O'Malley, John E. Dugan, Mayor J. W. Stevens, Frank B. Lasette, T. E. Kerwin and John Moran.

Mr. O'Malley opened the exercises and turned over the toastmastership to John E. Dugan.

Regrets from Governor Whitman, Dr. A. Sauter, Health Officer, and National President D. H. Roberts were read.

The speakers were: Deputy State State Commissioner of Health Dr. E. R. Williams, Mayor J. W. Stevens, Senator J. J. Walker, Retiring President Nolan, President J. L. Murphy, Frank B. Lasette, Assemblyman Malone, of Albany; Assemblyman Callahan, of New York; Coronor W. J. Flynn and Assemblyman Welsh.

Senator Gilchrist, of Brooklyn, sang his way into the hearts of the plumbers. He has a good tenor voice, which was thoroughly enjoyed between courses.



E. F. Disbrow, of Ford's Porcelain Works, Perth Amboy, N. J.; H. S. Ashmun, of the Greenfield Tap & Die Corporation, Greenfield, Mass.; Ed. Bent, of the F. W. Webb Mfg. Co., Boston; and L. F. Bannon, of Kingston, N. Y.

The entertainment committee of the Albany Association was composed of T. E. Kerwin, chairman; Horace F. Westcott, John H. Moran, J. Edw. Janes, Thos. F. Nolan, James H. Doody, John E. Dugan and Frank F. Schimpf.

Sidelights.

John Moran entertained all the past-presidents in attendance, at luncheon on Tuesday at the Kirwanis Club in the Hampton Hotel. His guests were Mayor J. W. Stevens, J. A. Rossman, Jas. A. Creelman, H. F. Westcott, B. F. Donohoe, J. E. Dugan, I. J. Brown, F. E. Fladd, G. L. Brucker, F. B. Lasette, T. E. O'Brien, T. F. Nolan, F. J. Fee, Frank Schimpf and Charles A. Campbell.

The Pretzel Club, it developed Tuesday night, is making rapid strides in point of membership. At a meeting at midnight three new victims were salted (initiated) by Chief Pretzel B. F. Donohoe.

The Monday arrivals were given an opportunity to view the manufacture of plumbing fixtures in motion pictures, exhibited at Arion Hall that evening, under the auspices of the local association, by the Standard Sanitary Manufacturing Co.

Among the Supply Men.

G. G. Wedding, vice-president of the American Valve & Tank Co., of Indianapolis, Ind., was the first one they had at the hotel in six months. Get that—it's a good one. The clerk pulled it on Wedding, when he registered Monday evening.

J. Stahl, Jr., treasurer of the Hercules Chemical Co., Inc., of New York City, came up on the "Limited" Monday evening to tell the delegates all about drain pipe solvent.

Oscar W. Rice, Rochester, was at every session and between them called attention to the closet cast-iron bend, manufactured by The Edward J. Rice Mfg. Co.

T. H. Bissell, eastern manager of the Bastian-Morley Co., of Chicago, was in attendance throughout the three days with a good word for his company's water heaters.

H. S. Ashmun, manager of the tool department of the

Greenfield Tap & Die Co., of Greenfield, Mass., had some neat post cards for the delegates to mail home.

Among members of the supply and manufacturing fraternity in attendance were also:

Billy J. Bapst, of the Trenton Potteries Co.; Howard G. Miller, of Thomas Maddock's Sons Co., Trenton, N. J.; Alfred Engle, of Jenkins Bros., New York; Raymond F. Brown, of Brayman Drain Co., New York; Thomas C.

G. G. Wedding, Vice-President of the American Valve & Tank Co., of Indianapolis, and J. Stahl, Jr., Treasurer of the Hercules Chemical Co., Inc., of New York City.

Cummins, of The New York Continental Jewell Filtration Co., New York; Robt. A. Baxter, Geo. W. Crane and John G. Chapman, of Pierce, Butler & Pierce Mfg. Corporation, Syracuse; B. M. Mitchell, of Peerless Selling Co., Evansville, Ind.; H. B. Kimmey, of L. Wolff Mfg. Co., Chicago; P. J. Baxter, of H. W. Johns-Manville Co., New York, and A. E. Gray, of Hoy & Co., Albany.

MISSOURI MASTER PLUMBERS' ANNUAL CONVENTION.

THE Missouri State Association of Master Plumbers held its annual convention at Springfield, Mo., on Monday and Tuesday, March 12th and 13th, with an exceptionally large attendance, making it one of the most successful and instructive gatherings in the history of the organization.

There were four sessions of the convention, at the first of which the delegates were warmly welcomed by the mayor of Springfield, who addressed the gathering at the Elks' Hall.

One of the important measures undertaken at the convention was the adoption of a resolution directed to the state officials, requesting them to let contracts for plumbing in state and other public buildings directly to the plumber, instead of awarding it along with other contracts to general contractors, as has been customary in the past.

This action was taken because of the experience that has been undergone in this state with general contractors from other parts of the country. Many of these general contractors sub-let their jobs to master plumbers of Missouri, agreeing to pay on estimates as the work was advanced, but failing to live up to their agreements and, even failing to complete their contracts, with the result that the sub-contractors frequently have been left holding the bag, with plumbing all installed and no money forthcoming, the general contractors having collected the money from the owners and failed to pass the sub-contractor's share along to him.

It is believed that this measure also will give the Missouri plumbers better opportunities to secure the work of their own state. When contracts are let in a general way to people outside the state it is sometimes the case that the general contractor will have his own group of sub-contractors and will bring them in to do the work, to the exclusion of the local people. The awarding of separate contracts for plumbing, however, will give the people at home at least equal chance with bidders from other sections of the country, irrespective of the awarding of the general contract.

A general discussion of the methods of ascertaining overhead charges by the master plumbers, was conducted by the educational committee and proved one of the most popular features of the convention. This committee is composed of master plumbers from all parts of the state, who have had a large experience. Throughout the year it serves the members of the association by instructing them how to overcome problems of estimating with which they are unfamiliar.

Much time of the convention was taken up with a discussion of the state plumbing code, which was drawn by the association and pushed through the legislature; and those instrumental in framing and securing the adoption of the measure were given unstinted praise.

Election of Officers.

A. Zertanna.

The association, as a mark of appreciation for the work of his past two terms, re-elected A. Zertanna, of St. Louis, president for the third successive time. Other officers chosen are: First vice-president, Charles Burgess, Joplin; second vice-president, Thomas Fogarty, Springfield; treasurer, James P. Carroll, St. Louis; secretary, C. L. Smith, Kansas City.

There is a board of directors of four men to be appointed by the president. Mr. Zertanna announced that he will name the members of this board next week, choosing them from different cities of the state.

PUBLIC INTERESTED IN EDUCATIONAL MOTION PICTURE, "THE TALE OF THE TUB."

The interesting industrial movie—"The Tale of the Tub," which is being shown at the principal jobbing points in Chicago territory, embracing the central western states, is attracting the attention not only of the plumbing fraternity, but of the general public as well. The publicity department of the Standard Sanitary Mfg. Co., of Pittsburgh, Pa., states that it is the company's intention to have service men visit the business centers for the purpose of giving special exhibitions of this motion picture to groups of plumbing contractors. The service men will carry portable moving picture projectors, which will facilitate the packing and unpacking of the apparatus in covering different cities.

Possibilities in the Foreign Export Field

By John J. Laferme, President of the
International Sanitary Co., Chicago

Continued from Page 281 in the February 24th Issue.

John J. Laferme.

HAVING written in a previous installment on the mistakes made by Americans seeking export sales, the writer will now proceed to indicate what his observations in foreign lands has suggested as being likely to allow American manufacturers to derive the benefit of their superiority to other manufacturers.

This superiority exists and I repeat the word with emphasis. It consists not only in the production of the goods but in the marketing of them. I do not mean to imply that the American excels in the production of everything he makes, but if one was to generalize, starting with equipment, ingenuity of labor, labor saving devices, facilities for large production, organization of staffs for selling, cost reckoning, distribution, advertising and the direct appeal of such advertising, manufacturers' and dealers' associations, if one was to generalize on these points and be in a situation to compare them with those in use in other countries, the comparison would be 100 per cent in favor of American methods, and they must win out, if brought into play for the benefit of export sales.

The foregoing eulogy must act as a palliative for any part of the following statement of the writer's opinion, which may be distasteful to some of his readers, and they must be taken somewhat in the nature of the old adage that to know one's defects is part of the remedy for them.

American manufacturers as a class are most ignorant of foreign countries, their requirements, the psychology of the people, their susceptibility, their traditions, too apt to confuse the Dutch and the Austrians with the Germans, the Belgians with the French, etc. Too prone to consider that England being only about as large as Illinois, and all of Europe much smaller than the States, a policy of sales such as in vogue in the States would suffice for any part or all of Europe. To many it is only since the present war that it has been brought to their attention that even though England is small, it has within its boundaries about two-thirds the population of these entire United States. That Belgium, which one can cross in three hours, has a population equal to that of Canada, and so on throughout Europe, not to mention the balance of the world's nations. In Europe alone there is a population of over 400,000,000, or more than four times the population of the United States. Manufacturers, some of whom do not even depend on the quality of their wares or the price of same as compared with others, but depend upon the size of their advertising appropriations and the ability of their advertising experts to appeal to the masses, should bear this in mind, and when you do, also bear in mind that advertising in Europe is in its childhood, with due apologies to Pears soap, Bovril, Sunlight soap and a few others.

In England and in Germany advertising is of a stereotyped nature, conservatively repeated for years and years. No advantage is taken of current topics, new bywords, nothing distinguishing, no effort to individualize to establish a recognized stamp or brand, to create a mark, to intrigue for an advantage. In France, advertising is prone to idealize, it is difficult to curb the artistic taste of the designer or the writer of the ads. The article advertised is usually surrounded with a halo of allegorism, not clearly and precisely depicted as on American advertising matter. Their posters and ads. are mostly works of art embodying past or present shades of illustrious, historical or patriotic people and their sayings or topics.

What an opportunity, what a virgin field for some of our American advertising, clearly depicting the article of sale! What a splendid chance to use some of our clear-cut methods of illustration, some of our bywords such as "A Case of Good Judgment," "It Chases Dirt," "There is a Reason," "Sunkist." I believe that anyone hearing or reading the above can recognize immediately their origin and almost see the goods thus advertised.

Now, then, you manufacturers, who have endeavored to do some export business, and who have participated in the annual expenditure of from $500,000,000 to $600,000,000 spent in the States in advertising to a 90,000,000 population, *how much have you spent in Europe to advertise to its population of* 400,000,000?

What have you done to secure distinction of, or recognition for, your wares in Europe? Advertising must be one of your adjuncts in courting foreign trade, and it is cheaper abroad than here. It has been far less cultivated and the ground is more fertile for it. The masses in Europe are just as apt, just as willing to be played upon, as they are here. In fact, the staging of your sales is easier there than here on account of its not having been studied to the extent it has here, but it requires some thought and study which should be gone into by men familiar with localisms, familiar with the market and familiar enough with the language to be able to play with words and take advantage of the peculiarities of the market in which he is operating.

This leads us into the most important requisite for the development of foreign sales, *not* advertising, as might be construed from this diatribe on the subject of *advertising* but *the man*.

The first thought of any manufacturer seeking export sales is to send out a man who has been with him a long while, therefore thoroughly familiar with the line to be offered, and its selling prices. This is natural but not exactly what is required. If the manufacturer had in his employ such a man, who might originally have come from France, there is no doubt that he would send him to that country to develop his sales there. That would be right.

My experience abroad in meeting American salesmen has been that they chafe at the small sales, the difficulty in seeing principals, the inexplicable delays in closing business; and because they chafe, they are apt to tell people how far better every condition is in the States. They don't mean to belittle the Europeans but they do so unconsciously and then they are done.

In every European country there is a number of good men, young men with a higher grade of education than the

average American of the same age, and I do not say this in a deprecating manner nor do I mean to make it a virtue of the European mind, but it is so because the public schools take in more of a developed course in Europe than in the States. Furthermore, it is to the credit of most of the young American salesmen that their natural ambition pushes them into commerce before their European brothers feel fit for the fray, and that the American youth's native ingenuity stands him in better stead than the better primary schooling does the European youth. These European youths are capable of excellent development, accustomed to the peculiarities of their countries. If not wise as to the requirements and possibilities of the goods to be marketed, they are quite apt to see them, more so than a stranger to the country, and it is among them that the men will be found who will develop the export business of this country.

Possibly it has never occurred to American manufacturers that in each large foreign city there is a United States consul, with whom he can get in touch, who will gladly place an advertisement in the papers for him and interview likely applicants, and in that manner more than likely find a young man, possibly with some knowledge of the line to be marketed, and worthy of bringing over to the States to remain at the factories and in the sales department for an educational period, during which he will familiarize himself with the line, prices, methods of sales, feasibility of altering patterns or inadvisability of so doing, etc.

In the last ten years the English language has been taken up extensively by the younger people abroad, and today there are ten times as many men on the Continent who speak English as there were a decade ago.

At the close of this horrible war there will be a legion of men of this type eager to affiliate themselves with just that sort of business connection, and those seeking export trade should endeavor right now to get in touch with the subject.

(To be continued.)

THEN AND NOW IN THE HEATING BUSINESS.

An Eulogy of the Good Olden Days and a Plea for Confidence, Quality and Good Workmanship.

By J. P. Lisk.

WHEN the field was new and heating engineers unknown, as we know them now, the old-time heating man, as we called him, did not make plans on paper, and if he had done so, the old-time pipe fitter and machinist would not have understood them.

The boss would simply go to the building and with a piece of chalk mark out where he wanted the radiators, if it was a steam job, or the registers, if it was hot air, giving the proper size of radiator or register for each room, and then the mechanic would do the rest. That is, he would cut holes through floors, walls and partitions for his pipes, figure out the size pipes to use, make out a list of pipe, fittings, valves, hangers etc., for the job.

When the material arrived on the job, he would put it together, and, strange to say, looking back from the present day viewpoint, the job worked and has kept on working through the many heating seasons since I was an apprentice boy, thirty-three years ago.

Looking over some of those old jobs, I cannot see where much, if any, improvement could be made, viewed from the standpoint of efficiency and economy of operation. Rules of thumb, common sense and practical experience, with a desire to know and do enough to keep our names on the pay-roll, is the answer to the question: "How did they manage to do such good work, before the present time?"

Those rules of thumb, as they are now called, were not the highly elastic things modern engineers credit them with being, but were rather rules devised from information gathered from the actual operation of plants working under similar conditions, and checked up from year to year by thoroughly practical men, and when applied with ordinary common sense, they landed on the target, even if they did not make a bull's eye, and that is better than can be said of much of the so-called science that is handed out today as universally adaptable and positively infallible.

I am perfectly willing to admit that the heating business is not what it used to be, neither are the customers buying heating apparatus as they used to buy it. They formerly wanted to buy enough heating apparatus to properly heat their house, or place of business. Now they want to buy some heating apparatus to put in a house or place of business, and figuratively speaking, they are satisfied to take the largest package for the smallest price, without reference to the quality that is offered.

Regardless of the fact that years of experience has developed great proficiency in the design of heating apparatus and the installation of heating plants, and, that all material and appliances entering into the construction and installation of heating plants has been trimmed of every pound of superfluous metal, the trade is not as well off today as it was twenty years ago. And why? For the simple reason that the heating trade has its greatest enemies in its own fold, and their names are, "Desperate Chance," "Beat Him To It," and "Get Away With It."

This story is not fiction, it is history, bought and paid for by the participants, and now the question is: "Are we going to keep on making more of it? It looks so, for we are doing nothing to stop it. The conditions that I have outlined were not built up in a day, and neither will they be corrected in a day; it will be a matter of time and individuality to get back to the top of the hill from which we coasted away to the valley of desperate conditions. How are we going to do it? Not easily by any means, but surely in the only way, and that is to sever all relations with the three enemies above mentioned and replace them with Confidence, Quality and Satisfied Client.

Now, gentlemen, who will be the first? It is not necessary to crowd, for there is plenty of room at the front at the present time, but let us hope it will not remain so.

Lewis Karges, the five-year-old son of John Karges, a well known master plumber in Kansas City, Mo., was taken to a Sunday school entertainment by his parents last Christmas, where he discovered that the Santa Claus at the school was not the one who had visited him at his home. In an effort to get posted he asked his mother, "Are there two Santa Clauses?" To which his mother answered: "There may be, for there are so many good little girls and boys in Kansas City that one Santa Claus could scarcely get around to fill all their stockings." Lewis, thinking that this was not his own Santa Claus, tried to tease him and finally Santa Claus asked Lewis: "Do you know who Mrs. Santa Claus is?" Lewis replied "Sure, it's Merry Christmas."

"My brother bought a motor here last week," said an angry man to the salesman that stepped up to greet him, "and he said if anything broke you would supply him with new parts."

"Certainly," said the salesman. "What does he want?"

"He wants two deltoid muscles, a couple of kneecaps, one elbow, and about half a yard of cuticle," said the man, "and he wants them at once."—"Christian Register."

Chino, Cal.—D. J. Smith, formerly in business in Los Angeles, has opened a plumbing establishment in this town.

Yuma, Ariz.—J. P. Enright and N. S. Parks have opened an up-to-date plumbing establishment under the style of Enright & Parks.

Los Gatos, Cal.—O. Lewis & Son, who recently retired from the plumbing business in this city, have decided to reopen their establishment.

Battle Creek, Mich.—Frank W. Hubbard has opened an up-to-date plumbing establishment in the Larkin Building, at the corner of State and Madison Streets.

Chicago, Ill.—The Stanley Plumbing & Heating Co. has been incorporated with a capital of $10,000. The incorporators are Clarence J. Bean, Elmer C. Lind and H. L. Webster.

Quincy, Ill.—The Gem City Plumbing & Heating Co. has just started in business at 809 Maine Street. Albert Rosenbusch and Frank Appenbrink are at the head of the new venture.

Indianapolis, Ind.—The Sanitary Heating & Ventilating Co., has been incorporated with a capital of $10,000. The incorporators are George Stevason, Ernest W. Kaser and Benjamin H. Stevens.

Peoria, Ill.—Charles L. O'Brien and William E. O'Brien have formed a partnership under the name of O'Brien Bros., and have opened a plumbing establishment at 807 South Adams Street.

Bisbee, Ariz.—Mainland & Williams have purchased A. Baxter's plumbing business.

Oatman, Ariz.—Louis Furrer has taken larger quarters for his plumbing business and established a large showroom in the Oatman Picture Theatre building.

Kewanee, Ill.—Long & Loser have moved their plumbing and heating establishment from the Guest Building to 218 West Second Street.

Macon, Ga.—The Ideal Heating & Plumbing Co. has moved its business from 507 Mulberry Street to Lanier Hotel Building, 521 Mulberry Street.

Miami, Ariz.—George Duenzen has purchased the business of the Miami Plumbing Co. He was previously engaged in business in Los Angeles and before that in Dunkirk, N. Y.

Great Falls, Mont.—The firm of Sherwood-Duggan Plumbing Co. has been dissolved and Richard Sherwood will carry on the business in the future under the firm name of the Sherwood Co.

Muscatine, Iowa.—Nesselbush & Co. have succeeded Nesselbush & Rolan and have moved into larger quarters. This firm specializes on residence work and has secured several plumbing contracts, on which work will be started as soon as the weather permits.

Greenville, O.—The Martin Street Plumbing Co. has been dissolved, Basil Grubbs and Joseph Zeller having purchased the interest of L. K. Cole, who is making arrangements to open a plumbing and heating establishment on his own account at 508 Central Avenue.

Jefferson, Wis.—Otto C. Steingraeber has just purchased the Bullwinkel Plumbing & Heating Co.'s business in this city.

Springfield, O.—The Cram-Desormoux Co. has secured the contract for the installation of up-to-date plumbing in O. S. Kelly Co.'s new plant.

Camden, N. J.—P. J. Sand, of Kaighn Avenue, has been awarded the contract for the installation of plumbing and heating in two new residences in this city.

Cadillac, Mich.—The Cadillac Plumbing & Heating Co. has secured the contract for the installation of a heating system in the Cadillac Auto Truck Co.'s plant.

Dillon, Mont.—The Dart Hardware & Implement Co. has been awarded the contract for the installation of plumbing and heating systems in the new Andrus Hotel in this city.

Watertown, S. D.—The Watertown Plumbing & Heating Co. has been awarded the contract for the installation of up-to-date plumbing and heating systems in the court house, which is to be built at Clear Lake, S. D., this spring.

Grand Rapids, Mich.—C. K. Kuennen, of 155 Crescent Avenue, W., has been awarded the contract for the installation of up-to-date plumbing in the new Burtch Building on Widdicomb Street.

Brainerd, Minn.—The Brainerd Plumbing & Heating Co. has secured the contract for the installation of up-to-date plumbing in the Gull Lake Station.

Grand Rapids, Mich.—The Weatherly Co. has been awarded the contract for the installation of a heating system in the new addition to the Ypsilanti Reed Furniture Co.'s plant at Ionia, Mich.

Iron Mountain, Mich.—Theodore Firme & Son have been awarded the contract for the installation of modern plumbing in the Corin building in this city.

Springfield, O.—Charles E. Ridenour & Co. have been awarded the contract for the installation of a heating system in the county infirmary building at Tiffin, O. The contract amounts to $6,832.

Denver, Colo.—Johnson & Davis have been awarded the contract for the installation of plumbing systems in the garage, stable, gardner's cottage and greenhouses now being built near Sheridan, Wyo., for Verner Reeda.

East St. Louis, Ill.—Edward J. Maag, of 414 Illinois Avenue, has been awarded the contract for the installation of plumbing in the new $100,000 addition to Armour's plant in this city. The contract amounts to more than $10,000.

PUBLIC COMFORT STATIONS.

A new public comfort station and rest room is being constructed in the County Building, on West Market Street, West Chester, Pa.

The Park Commission of Syracuse, N. Y., has decided to build a public comfort station in Schiller Park, in that city.

The Board of Public Works in Terre Haute, Ind., is planning the construction of several public comfort stations in the business section of that city.

THE PRICE OF IMITATION.

By Bob Stiles.

A great deal has been said of late relative to the failure of those in business to know their costs, which has resulted in, and is largely responsible for, a large part of so termed "unfair competition." One of the most glaring bits of extravagance indulged in, for the sake of being fashionable or because "everyone's doin' it," is in the reckless allowance of cash discount, the extension of time in this connection having extended the time of payment to the point, which the Central Supply Association years ago resolved should be the limit of time for the general extension of credit on net terms: 30 days.

Years ago, when the writer first became acquainted with the custom and terms involved in credit transactions in the trade, it was not an uncommon thing to grant terms of four months. Then if the alternative was offered to pay in 10 days less 2 per cent, the proposition was strictly a reasonable one of practically offering 6 per cent for the money received in anticipated payment. Money then was even worth more than that. Where are we today? Money today is available, let us say, at 4 per cent (some of us can get it for less), and in some cases we are standing for a cash discount allowance that figures the concession of no less than 146 per cent per annum interest for the favor of payment of our bills five days before they are due net. This is evident on the face of a transaction involving the payment of a 30-day account (due net on the 15th), when paid on the 10th. A 60-day account discounted on the 10th of the month following purchase, figures allowing interest at the rate of approximately 20 per cent per annum. Even when in sane times, the allowance was presumably confined to 10-day payment, it involved paying approximately 36 per cent on 30-day accounts and 14 per cent on the 60-day accounts.

Happy is the jobber, who at the end of any year can say to the man in the looking glass: "I have made a net profit on my sales of 6 per cent." To probably not one does the thought come that that could be increased to 7 or nearly 8, maybe, by abolishing the pernicious 2 per cent "bonus" (cash discount is a misnomer), getting down to net terms, and depending on price, service, fair dealing and prompt collections, to keep the wheels turning.

In the limited discussion the writer has had with a few of the trade, on this subject, one argument was: "I will not be able to get in enough money in time for my needs." The answer to that is, of course, go to the bank and borrow. That is what banks are for. Chances are that the customer is doing that very thing, borrowing from the bank at 4 or 5 per cent and getting 20 per cent out of you. Turn it around and get the long end yourself.

With a properly conducted bureau or clearing house, and fair and honest co-operation on the part of the members of it, so that proper safeguards may be provided against *those who are being extended too much credit; they are the only ones who fail*, there is no reason why terms of sale cannot be made successfully: net 30 days, or 60 in some cases, or spot cash, and every one involved get a fair run for his money, depending on the elementary and natural functions of doing business on price, quality, service and hard work.

The old-fashioned, out-of-date custom of giving something for nothing, under the false designation of "cash discount," should be abandoned and relegated to the grave with the old chromo with each pound of tea, and it can be done if you think it over carefully, *figure your costs* and interest yourselves in getting others to look at the matter as you do.

March 26, 1916.—The annual convention of Tennessee Master Plumbers' Association, at Memphis.

March 28 and 29, 1917.—The spring meeting of the National Association of Brass Manufacturers, at the Congress Hotel in Chicago.

April 9, 1917.—The annual convention of the Arkansas State Association of Master Plumbers, at Fort Smith, Ark.

April 11, 1917.—The annual convention of the Massachusetts State Association of Master Plumbers, at Boston, with headquarters at the Copley Square Hotel. The annual dinner will be given the night before.

May 7 and 8, 1917.—The annual convention of the Kentucky State Association of Master Plumbers, at Paducah, Ky.

May 9 and 10, 1917.—The annual convention of the National Pipe and Supplies Association, in Philadelphia, with headquarters at the Bellevue-Stratford Hotel.

May 14, 15 and 16, 1917.—The annual convention of the Master Plumbers' Association of Texas, in Galveston, with headquarters at Hotel Galvez.

May 22 and 23, 1917.—The annual convention of the Pennsylvania State Association of Master Plumbers, at Reading, Pa.

May 15, 16 and 17, 1917.—The sixteenth annual convention of the New Jersey State Association of Master Plumbers, at Jersey City, N. J., the sessions to be held in the Elks Hall.

June 12-15, 1917.—The ninth annual convention of the National District Heating Association at Detroit, Mich., with headquarters at Hotel Pontchartrain.

June 19, 20 and 21, 1917.—The thirty-fifth annual convention of the National Association of Master Plumbers, at Evansville, Ind., with headquarters at the New Hotel McCurdy.

July 18, 19 and 20, 1917.—The summer meeting of the American Society of Heating and Ventilating Engineers in Chicago.

August 1, 2 and 3, 1917.—The annual meeting of the American Society of Sanitary Engineering, at Grand Rapids, Mich., with headquarters at the Pantland Hotel.

DATES FIXED FOR ANNUAL MEETING OF A. S. S. E.

The American Society of Sanitary Engineering will hold its next annual meeting in Grand Rapids, Mich., on Wednesday, Thursday and Friday, August 1, 2 and 3, 1917, with convention headquarters at the Pantland Hotel, according to the official call just issued by William C. Groeniger, of Columbus, O., president of the society. It is expected that this meeting will be well attended by reason of the many important subjects to be reported on by the Committee on Research and on account of the submission of a report on the Basis for Standard for the Adoption of State and City Plumbing Codes.

Among the Wholesalers and Manufacturers

COMPANIES RECENTLY INCORPORATED.

The Mid-City Plumbing Supply Co., of Chicago, has been incorporated with a capital of $15,000. The incorporators are: M. Fisher, Louis Vanner and G. Gotsgall.

Midwest Brass Mfg. Co., of Aurora, Ill., has been incorporated with a capital of $50,000, to manufacture plumbing specialties. The incorporators are Glen T. Johnson, Charles E. Day and Dwight K. Emigh.

The General Heating Supply Co., of 415 Reliance Building, Kansas City, Mo., has been incorporated with a capital of $10,000. The officers are Martin Hauser, president; E. A. Cline, secretary, and J. H. Bledsoe, treasurer. This business was established in 1913 by Martin Hauser and J. H. Bledsoe as a co-partnership, and E. A. Cline has been associated with the firm the past year.

SPRING MEETING OF N. A. B. M. POSTPONED.

Owing to the threatened railroad strike the spring meeting of the National Association of Brass Manufacturers was postponed one week, and it will thus be held Wednesday and Thursday, March 28th and 29th, at the Congress Hotel in Chicago.

OPENS BRANCH OFFICE IN BUFFALO.

Sarco Co., Inc., of Woolworth Building, New York City, announces the opening of another branch office. The new office is located at 325 Ellicott Square, Buffalo, N. Y., and it is in charge of F. D. Harger, M. E.

GREENFIELD TAP & DIE CORPORATION OFFERS PLANT TO GOVERNMENT.

The Greenfield Tap & Die Corporation, of Greenfield, Mass., has offered the services of its entire plant to President Wilson, should the country need it in the event of hostilities.

WILL SOON MANUFACTURE STEAM FITTINGS.

The National Pipe & Foundry Co., of Attalla, Ala., is building a new foundry at its plant in that city for the purpose of manufacturing cast iron steam fittings. It is expected that this new plant will be in operation about June 1st. Eichel & Co., of Richmond, Va., will continue as sales agents for this company's products.

D. & T. MFG. CO. IN NEW QUARTERS.

The D. & T. Mfg. Co., of St. Louis, Mo., has moved from 1915 Hamilton Avenue into its new offices and warehouse at 1911-13 Pine Street. Its new plant is a two-story building, 200 feet deep, its offices and warehouse being on the first floor and its machine shop and laboratory on the second floor.

THE MARCH MEETING OF THE MICHIGAN CHAPTER OF A. S. H. & V. E.

The Michigan Chapter of the American Society of Heating and Ventilating Engineers held its regular monthly meeting at the Fellowcraft Club, in Detroit, Mich., on Monday evening, March 19th, with an attendance of 58. E. E. Harris read an interesting paper on "The Heating and Ventilating of Ford Motor Co.'s Factory." A lengthy discussion followed the reading of the paper. The next meeting will be held on Saturday evening, April 28th, on which occasion a paper on "The Fundamental Principles of Ventilation," will be read by J. R. McColl.

THE A. J. BEATON MFG. CO. ORGANIZED.

Allan J. Beaton, for many years identified with the manufacture of floor and ceiling plates, valves and steam specialties, has organized the A. J. Beaton Mfg. Co., with an authorized capital stock of $50,000, to manufacture floor and ceiling plates, valves and other steam specialties. Mr. Beaton is the originator of many specialties in this line and he has followed it for the past 30 years. A temporary office has been established in the Dickinson Drug Building, at New Britain, Conn.

MONTHLY MEETING OF THE CHICAGO COMMISSION ON VENTILATION.

The regular monthly meeting and dinner of the Chicago Commission on Ventilation was held at the Engineers' Club, Chicago, on Tuesday evening, March 20th. Charles U. Freund, engineer for the commission, was the speaker of the evening. He reported on a number of ventilating tests made in connection with several public schools. Dr. E. Vernon Hill, chairman of the test committee, also spoke. The next meeting of the commission will be held on Tuesday evening, April 17th, at the same club.

F. W. ROEBLING CALLED BY DEATH.

Ferdinand W. Roebling, Sr., president of the Trenton Brass & Machine Co., of Trenton, N. J., and secretary-treasurer of the John A. Roebling Sons Co., builders of the Brooklyn (N. Y.) Bridge, died Friday, March 16th, of heart disease, at his home in Trenton, in his 76th year. He was born in Saxonburg, Pa., and was a graduate of the Polytechnic College in Philadelphia. His wide business interests included directorships and offices in more than a dozen concerns. He was a member of the Union League Club and the Engineers' Club in New York City. Mr. Roebling married Miss Margaret G. Allison, of Trenton, in March, 1867. He leaves two sons, two daughters and three brothers, the latter being Washington A., Charles G. and Edward Roebling.

J. J. COSGROVE RESIGNS COMFORT STATION BUREAU OFFICE.

J. J. Cosgrove has resigned his position as director of the Public Comfort Station Bureau of the National Committee of the Confederated Supply Associations, in New York City. His resignation was accepted by President L. O. Koven, and Mr. Cosgrove is entering the consulting engineering field. Pending the engagement of another aggressive man to carry along the work of the bureau, its activities are being handled by Secretary Hanley's office.

E. F. HOUGHTON & CO.'S NEW CHICAGO PLANT.

E. F. Houghton & Co., of Philadelphia, Pa., have just opened a new warehouse and offices at 2831-2837 South La Salle Street, Chicago, for the distribution of its heating specialties in the territory west of the Ohio-Indiana line

The new Chicago Offices and Warehouse of E. F. Houghton & Co., of Philadelphia.

to the West Coast and from the Canadian provinces to the Gulf. A complete stock of the company's products will be carried at this plant, which is equipped with up-to-date facilities for handling material and serving the company's trade. T. F. Hynes, district sales manager, is in charge of this branch.

ANNUAL DINNER OF NEW ENGLAND PLUMBING AND HEATING SUPPLY SALESMEN.

The eleventh annual dinner of the Plumbing, Steam and Metal Salesmen's Association was held at Riverton Park Casino, Portland, Me., on Monday evening, March 12th. A number of the salesmen arrived at the park during the early afternoon, and from that time until 6:30 a social session was enjoyed, the casino being "owned" by the association throughout the afternoon and evening. The dinner, which was one of the Mine Host Smith's finest, was preceded by the annual business meeting when the following officers were elected: President, Frank S. Billings, Boston; first vice-president, H. S. Wakeley, Bangor; second vice-president, D. J. Dever, New York; third vice-president, G. H. H. Lawton, Portland; treasurer, A. M. Rosebrook, Portland; financial secretary, R. C. Parker, Portland; recording secretary, Ellsworth F. Hayden, Portland.

As usual there was no formality to the "time," but all present had the "time" of their lives. Miss Bernadette Moreau's orchestra furnished the music for the occasion and the singing of various members of the association was one of the features of the evening. In addition to the officers, the following were present: C. R. Nelson, Portland; J. Warren Chase, Portland; W. F. Snow, Portland; Charles W. Carr, Portland; A. W. Marston, Portland; R. B. Andros, Portland; E. H. Winslow, Portland; Irving E. Fogg, Westbrook; Byron E. Near, Cape Elizabeth; C. S. Mallard, Boston; George W. Paul, Boston; A. E. Campbell, Boston; J. M. Griffith, Boston; J. E. Herrick, Beverly, Mass.; Harold W. Coombs, Nathaniel M. Doten, Ralph D. Rich, Frank E. Johnson, Walter E. Stevens, H. P. Chadbourne, H. P. Files and R. A. Nardblom, all of Boston.

CANADIAN COMPANY BUYS COHOES ROLLING MILL CO.

The Page Hersey Iron, Tube & Lead Co., of Toronto, Ont., Canada, has purchased the business and plant of the Cohoes Rolling Mill Co., at Cohoes, N. Y. The name of the latter company will remain unchanged, and its plant will be operated as a branch of the home company in Toronto. The object of acquiring this plant is to obtain skelp for the Canadian company's plants, there being a very limited supply obtainable at the present time in the United States and none made in Canada. The retiring officers of the Cohoes Rolling Mill Co. are: George H. Page, president and treasurer; Samuel T. Page, vice-president, and Albert W. Powers, secretary. The new officers are: President, Wallace W. Near, Toronto, Canada; vice-president, D. H. Friedman, Albany; treasurer, David Muhlfelder, Albany, N. Y.

Personal Mention

E. W. Sanborn, of Chicago, representing the Detroit Range Boiler Co., and the Lavigne Mfg. Co., both of Detroit, left this week for an extended trip to the Pacific Coast.

A. M. Spencer, secretary and general manager of the Beauvais Water Heater Co., of Springfield, Mass., has just returned from Florida, where he has been spending the first three weeks of March with his family.

C. B. Baxter, who has represented the Chicago promotional department of the Standard Sanitary Mfg. Co., will hereafter be identified with the company's San Francisco office as assistant to W. C. Chamberlain, manager.

Paul Blatchford, secretary of the Central Supply Association and prominent in golf circles, is spending two weeks in Asheville, N. C., training for the coming season, a fact which has been duly reported to the handicapper of the Western Trade Golf Association.

George H. Bailey, president of the Bailey-Farrell Mfg. Co., of Pittsburgh, Pa., was in New York last week inspecting the show rooms of jobbers and manufacturers. His company is preparing to install a new display room and Mr. Bailey secured some first-hand pointers on modern show-room equipment.

W. P. Wash, who was associated with the Model Heating Co. from 1903 until 1908 and later with the McCrum-Howell Co., the J. H. McLain Co., and the Freed Heater Co., has opened offices at 10½ Kirk Avenue, Roanoke, Va., as manufacturers' agent for plumbing and heating supplies.

He will do business under the name of the W. P. Wash Sales & Engineering Co.

Fred Moody, of Cluff Brothers, of Toronto, Canada, visited the New York trade this week.

L. B. Fulton, manager of the Chicago branch of the Standard Sanitary Mfg. Co., of Pittsburgh, Pa., is making a business trip through Montana, the Dakotas and Minnesota. He will return on or about April 1st. L. C. Le Fleur, representing the Great Western Potteries Division of the company, returned on Friday from a business tour through Iowa and Nebraska. He reports trade conditions to be exceedingly brisk.

Claims Longest Name in Michigan.

According to "The Plumbing News," a reliable journal published in Pittsburgh, there appears on page 896 of the Kalamazoo city directory the name of Polybus Theodorocoumoundorgeotopoulos, a waiter in a restaurant. The above publication further states that this name, containing 11 syllables and 28 letters, is the longest one appearing in any city directory in Michigan. The Kalamazoo Sanitary Manufacturing Company, which has a reputation of being long on tanks and flush valves, has entered a protest, its claim being 16 syllables and 37 letters.

Moral: A waiter can't always get the best of you in Michigan.

Steel and Iron.

The influx of orders for steel products last week, on which price advances had been recently made, showed that such advances would prove a barrier to domestic consumption. Consumers do not reckon on any industrial disturbances, if this country enters the war, but view that event as being the basis for still further congestion in mills and a tightening of steel supply. Ship plates continued to be the feature of the market, one eastern Pennsylvania maker advanced the price $10 a ton to 7.50 cents, Pittsburgh. Tank plates were marked up to 6.00 cents, Pittsburgh. More contracts for tonnage were placed last week. The Cunard line is now credited with placing orders for 38 steamships. The Bethlehem Steel Co. has ordered some vessels, while contracts for naval work placed last week involve considerable tonnage. Sales of plates last week amounted to 80,000 tons, some being ordered for first quarter 1919. The Japanese are in the market for ship plates. Bids are to be opened early in April for the Navy Department on torpedo boats and submarines, which will further crowd the ship yards, while the Royal Mail Steam Packet Co. is the second large British line to open negotiations for vessels. Orders for 9,216 cars and 66 locomotives were placed last week, 4,216 cars for domestic railroads and 5,000 for Russia.

Orders for 90,000 tons of pig iron were placed last week by domestic consumers largely for shipment this year. Prices advanced because of the insistent demand. Eastern Pennsylvania makers advanced basic iron and foundry grades $2 a ton, while in the Pittsburgh district Bessemer advanced $1 a ton. Valley furnaces sold basic at $32 furnace, while eastern Pennsylvania makers took large orders at $34, delivered. Buffalo furnaces advanced to $40 for foundry and malleable, while Chicago makers put No. 2 X up to $35.50, furnaces. Virginia furnaces, after taking large orders for 1918 shipment at $32, advanced to $33, furnace, while Buffalo producers advanced $1 to $34 for first half 1918 shipment. The largest purchase was made by the Lukens Iron & Steel Co., which took 40,000 tons from five makers at $33.80, delivered. Fear of a railroad strike strengthened the spot coke market, which eased off to $13.50, while foundry coke on contract advanced to $8.50, ovens, and some large sales were made at that price. Quotations are as follows:

No. 2 X Northern foundry, New York	$35.50	to	$36.50
No. 2 X Northern foundry, Buffalo	38.00	to	40.00
No. 2 X Southern foundry, Birmingham	29.00	to	30.00
No. 2 X Southern foundry, Cincinnati	31.90	to	32.90
No. 2 X Northern foundry, Chicago	35.00	to	36.00
No. 2 Southern Ohio Coke, Cincinnati	28.50	to	29.50

Copper.

Buying of copper by domestic consumers continued in large volume last week, involving about 15,000,000 pounds. The future market held firm, but nearby metal sagged under four offerings, while the appearance of some low-grade metal acted to give the nearby market a soft appearance. Buying was generally limited to the third quarter, but there was some business done in sizable lots for copper to be delivered over the last half of the year. Producers are expecting a foreign inquiry before long. A troublesome factor was the continuation of the strike at the Laurel Hill refinery of the Nichols Copper Co. This plant produces over a million pounds of copper a day and the loss of shipments will soon be felt by consumers who depend on this refinery. Spot electrolytic was held at 37½ cents early in the week, but closed at 35½ cents. Exports of copper in February were 30,392 tons.

Lead.

Freer arrivals of lead brought spot metal to lower levels, but the market was low last week. Spot was offered to 9¾ cents, New York. Some consumers were in the market for futures, but perceiving the easier situation withdrew inquiries. Underlying conditions are strong, however, and it is not expected that May metal will go below 9 cents, New York. There was an inquiry from French interests for 2,000 tons, 500 tons a month for four months, but there is no record of its having been placed as yet.

Spelter.

Business in spelter last week was in small volume, causing the appearance of weakness, although producers urged the high cost of ore as being the basis for maintaining futures. Spot prime Western was offered at 10½ cents, St. Louis. Consumers are of the opinion that the strained ore situation will soon be relieved, milder weather aiding production.

Tin.

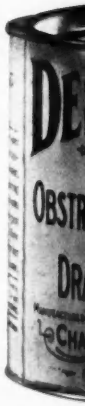
The report that the British Government was to put a tax on pig tin from the Straits settlements was the only new feature in the market last week. Sales were chiefly for spot at prices ranging from 53 cents to 54 cents. No future metal was offered, sellers being inclined to wait for the metal to arrive and thus take the spot premium.

Old Metals.

Selling prices for old metals are quoted approximately as follows:

Copper, heavy cut and crucible	33¼ cents
Copper, light and bottoms	26½ cents
Brass, heavy	19 cents
Brass, light	15¾ cents
Lead, heavy	8⅞ cents
Tea lead	7⅝ cents
Zinc scrap	9⅛ cents

COLD WATER



You do not need hot water if you use DESOLVO It generates its own heat

DESOLVO **Does its Work Quickly and Thoroughly.**

Simply mix DESOLVO with COLD water and pour into the obstructed pipe. Owing to its specific gravity, it seeks the stoppage and the violent action and heat produced by it dissolves all soluble matter.

DESOLVO clears the pipe in less time than it requires to get ready to use the old methods. Will not injure pipes or plumbing.

The wide-awake master plumber who is conducting his business on a strictly efficiency basis, appreciates the value of DESOLVO for clearing clogged pipes.

The saving of time and labor by using the modern method—DESOLVO—instead of tearing up floors, walls, tiling, pipes and plumbing fixtures, adds greatly to the plumber's profits and always results in pleasing the customer.

Also use DESOLVO for thawing frozen drains and stacks.

DESOLVO—The Plumber's Friend of the 20th Century

Manuf

The Chamberlain Company

RAND DESOLVO

K-K is an improved Powdered Chemical for removing stains and foul odors from closet bowls

There is no labor whatever connected with the use of K-K. No scrubbing, scouring or brushing. Shake a little into the bowl, allow to stand a few minutes, flush, and the trap is cleaned thoroughly as well as the bowl.

K-K does away with all odors and leaves the bowl clean and sanitary. Will not injure the bowl or affect the plumbing.

K-K is scientifically prepared for the purpose of cleaning stains, etc., from closet bowls and porcelain urinals only. It is not a general cleaner.

If you haven't a supply of K-K in stock you are losing good, easy money. Your trade wants it, and wherever there is a closet bowl installed, there is a demand for K-K.

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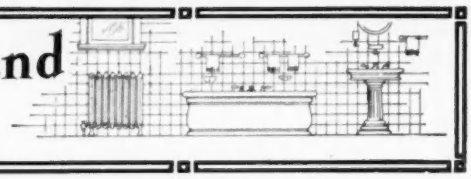


Illinois

Chicago and Vicinity.

Robert M. Sweitzer, county clerk and former mayoralty candidate, was the guest of honor at the recent monthly meeting and dinner of the Chicago Master Steamfitters' Association, held at the Hotel La Salle. Following the disposal of the usual routine business of the association, Mr. Sweitzer addressed the members upon the subject of "Loyalty, as One of the Great Factors of Organized Strength," declaring that without the element of loyalty in an organization, no healthy growth or progress is possible. He talked for nearly an hour, interspersing his address with many humorous anecdotes.

M. J. Cragin, master steamfitter, 746 East Forty-third Street, has recently been elected a member of the Chicago Master Steamfitters' Association.

George H. Kirk, of 6711 Wentworth Avenue, and one of the well known members of the Illinois Chapter of Heating and Ventilating Engineers, has just returned from a fishing trip to Key West, Florida. Although he was inclined to be modest when the subject of his ichtyological activity was broached, he was at length prevailed to confess that he had yanked from the briny deep a goodly number of seven, eight and ten-pound creatures, known in piscatorial parlance as "King Fish."

The Board of Plumbing Examiners, City of Chicago, has recently issued master's certificates to Walter E. McCarthy, of 2556 Division Street, and John N. Nelson, of 4036 North Avers Avenue.

Baker & Smith Co., of 408 Wells Street, will install the heating plant in a freight station and loft building to be erected at a total cost of $1,750,000, at 2001-2059 West Thirty-ninth Street.

Carl J. Stein, of 853 South State Street, has been awarded the contract for installing the plumbing system in the new Crystal Theater building, to consist of hall, store and offices, at 2701-2711 West North Avenue.

The P. Nacey Co., of 927 South State Street, has been awarded the contract for the installation of the plumbing in a manufacturing plant to be built at a cost of $150,000 at the northwest corner of Racine and Fullerton Avenues. The heating system will be installed by E. J. McDonough Co., of 19 West Kinzie Street.

The Chicago Steam Heating Co., of 169 North Jefferson Street, will install the heating plant in a residence and garage to be built at a cost of $10,000, at 4906 Bernard Street. P. K. Clayton, of 1957 North Western Avenue, will install the plumbing system.

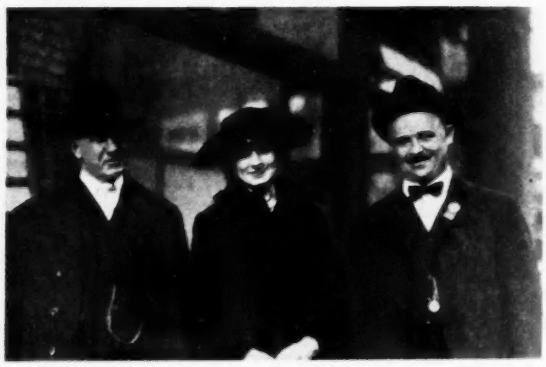
George Hill, of 6314 South Fifty-sixth Avenue, has secured the contract for installing the plumbing in an addition to a factory to be built at a cost of $90,000 at Sixty-sixth Street and Fifty-eighth Avenue. The L. H. Prentice Co., of 330 Sherman Street, has been awarded the heating contract.

The Davis Construction Co., 175 North Dearborn Street, will install the heating system in a $55,000 addition to a mercantile building at 1332-1334 South Wabash Avenue.

W. B. Brown, of 19 South La Salle Stret, has recently been awarded the contract for installing a heating plant in a large factory on Kedzie Avenue, north of Lawrence Avenue. The contract amounts to $60,000.

The United Plumbing & Heating Co., of 3012 West Twelfth Street, has secured the plumbing contract for a public garage, to be built at a cost of $18,000, at 1120 South Kedzie Avenue.

B. Rosenbloom, of 1308 South Crawford Avenue, has been awarded the contract for the installation of the plumbing in a three-family and store building, to be constructed at a cost of $12,000 on Southport Avenue.



W. R. Black, of Chicago; Miss Calvert, of East St. Louis, and E. C. Wagner of Chicago.—From "Domestic Engineering" Photo, taken at Illinois Master Plumbers' recent Convention in East St. Louis, Ill.

Housing Bill to Be Introduced in Illinois State Legislature.

A housing bill, comprehensive in its scope, will soon be introduced in the Illinois state legislature. The bill is somewhat similar to the one which has already passed the lower house in Minnesota, and is about to be presented to the state senate. In the proposed Illinois housing bill many provisions, embracing domestic sanitation, including plumbing and drainage are injected. Charles B. Ball, chief of the Chicago Bureau of Sanitation, who has been instrumental in drafting the bill, has invited master plumbers, both locally and throughout the state, to lend their support in fostering the bill. Master plumbers are invited to attend a meeting in Room 204, City Hall, Chicago, at 2 p. m., Monday, March 26th, on which occasion the bill will be further discussed. Recently the state senate committee met in conference with Mr. Ball and others at the City Hall to discuss the merits of the proposed legislation.

Other Cities in the State.

Marcus Weil, of 3744 West Chicago Avenue, has secured the contract for installing the plumbing system in a residence and garage, to be erected at a cost of $30,000, at Wilmette.

The T. E. Walters Plumbing & Heating Co., of Aurora, will install the heating and plumbing systems in a $35,000 store building to be constructed on Main Street, in that city.

John Dunn, of De Kalb, has been awarded the con-

tract for the installation of the plumbing in a bungalow to be built in that city.

Swords Bros. Co., of Seventh Street, Rockford, has secured the plumbing contract for a branch library and store building to be erected at Sixth and Fourth Streets, in that city. Estimated cost of construction, $15,000.

The Moline Heating & Construction Co., of Moline, will install the heating and plumbing systems in a church in that city, which is to be built at a cost of $70,000.

The Hasse Plumbing Co., of Quincy, has recently been awarded the contract for installing the plumbing system in a department store, to be built at a cost of $150,000, in that city.

Indiana

R. E. Mollenhour and T. W. Tell, of Mentone, have opened a plumbing establishment in the business district in that town. The new firm will be known as the Mollenhour & Tell Plumbing Co.

The Hoosier Plumbing & Heating Company, of Shelbyville, has been awarded the contract for the installation of plumbing, heating and ventilating systems in the new addition to the Shelbyville high school building. The contract amounts to $15,630.

Bachman Bros., of Laporte, have just completed the installation of the plumbing in the new Sunday school rooms that have been added to the First Christian church of Laporte. The heating plant was installed by Paul Dolan, also of Laporte.

The Fort Wayne Board of Public Works has issued warnings to Fort Wayne plumbers, notifying them that they will be liable to prosecution if they remove meters and turn water on properties, where the city had ordered the water turned off for nonpayment of bills.

Joseph H. McQuire, of 911 Calumet Street, Hammond, has received the contract for the plumbing and heating in two new bungalows that are being erected there.

B. J. Gibney & Son, of Huntington, will do the plumbing and heating in the $25,000 fire station that is being built at Cherry and West State Street, in that city.

The Central Plumbing & Heating Co., of Hammond, has secured the contract for the plumbing and heating in a new bungalow at 1237 Van Buren Street. Work will be started at once.

A. Haberstock, of 525 Wayne Street, Fort Wayne, will do the plumbing and heating in C. Dammenfelser's new residence at 1020 Clinton Street.

Mrs. W. C. Hunter, wife of W. C. Hunter, a master plumber of Kokomo, fell on the steps of the Elks Building at Logansport last week and fractured her leg. Mrs. Hunter was with her husband attending the convention of the Indiana Society of Sanitary Engineers. She was brought back to Kokomo and is said to be improving rapidly.

Charles Stamm, who is engaged in the plumbing and heating business in Portsmouth, O., has been spending a ten days' vacation at West Baden Springs.

Minnesota

St. Paul and Vicinity.

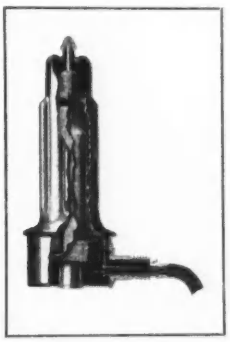
Recent permits for plumbing work include one to A. E. Schnaith on a two-story cement block factory, being erected by the J. C. Vanderbie Company at Partridge and Brunson Streets.

C. J. Conroy has the contract for plumbing work on

HOFFMAN VALVES

Economy in the Long Run

When you consider that a heating system can be **permanently** equipped with venting valves—the **first** cost being the **only** cost—you will readily appreciate the saving of time, money and reputation, by using the right kind of valves.



The No. 1 Hoffman Syphon Air Valve

attached to a radiator is positive insurance against leakage of steam or water, noisy operation—in fact, every other fault common to air valves.

Entirely Automatic. Having separate and distinct air and water chambers, it keeps radiator free from air and closes tight against steam and water leakage.

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There is a Hoffman Venting Valve for every service.

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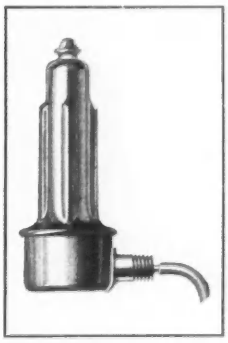
Each and every valve bearing the name **"Hoffman"** is unqualifiedly guaranteed for five full years of service, and if not satisfactory, it will either be replaced or the money refunded, without argument.



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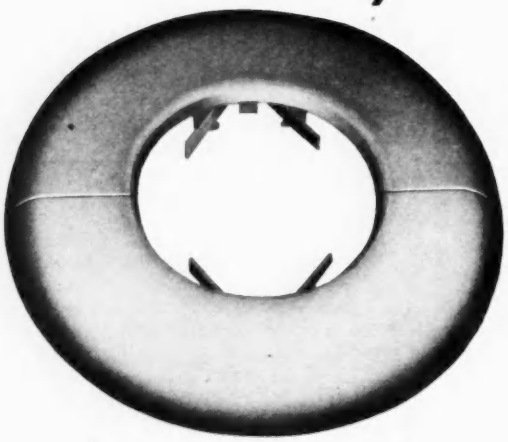

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Rolled steel hinged, reinforced

Our No. 10 Plate challenges comparison with any so-called imitation plate made of steel or grey iron—spot welded, riveted or disguised by any other method.

Made in any finish or material to match hardware in building.

This plate has become so popular that we carry ample stock at all times ready for immediate shipment in any quantity, in sizes from 3/8 inch to 4 inch inclusive.

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Wm. P. Horn Co., Rialto Bldg., San Francisco, Cal., Portland, Ore., and Los Angeles, Cal.
Joseph G. Walsh Co., 323 Reliance Bldg., Kansas City, Mo.
J. C. McLoughlin, 808 Holston Bank Bldg., Knoxville, Tenn.

Robert Carlick's three-story stone warehouse at 103 East Third Street.

L. J. Rozycki is doing the plumbing work on the dwelling of Stanley Lukur, at Geranium and Mendota Streets; also on the dwelling being erected by Stahl & Comstock at Grand and Finn Avenues.

E. R. Johnson is doing the plumbing work on the frame duplex of Mr. Lindquist, Lafond and Albert Streets, and on the dwellings of John Thulien and J. Peterson.

J. P. Adamson has the contracts for plumbing work on the Johnson residence, Chelton Street and Fairview Avenue, and on the frame dwelling for Peter Paulson, 2132 Ann Arbor Street.

Thomas J. Clark is doing the plumbing work on a two-story brick building at 1732 Selby Avenue, owned by A. Volp.

J. W. Martin is doing the plumbing work on the two-story frame house for Swan Monson, at Central Avenue and Dunlap Street.

T. B. Dougherty is doing the plumbing work on the dwelling for W. J. McCarron, 1604 Berkeley Avenue and on the dwelling for Charles Peterson, York and Westminster Streets.

B. E. Cardinal is doing the plumbing work on the dwelling of Thomas Sartsfield, at 1103 Thomas Street.

Geo. W. Coverdale has the contract for the plumbing in a residence at Hewitt Avenue and Aldine Street.

Carl Rascher is doing the plumbing work on the dwelling owned by Paul Guertin at Smith Avenue and Belmont Street.

Missouri

St. Louis and Vicinity.

While there is not a great deal of new work being offered plumbers at the present time, architects have announced plans in preparation for both big office buildings, schools, large apartments and smaller residences which will furnish as much work later on as the plumbers will care to seek. L. Fink, president of the St. Louis Master Plumbers' Association, states that he expects to see all the St. Louis firms busy with the coming of spring and it is generally believed that announcements of the awarding of contracts aggregating a huge sum will be made within the next few weeks.

The Missouri senate Monday followed the example of the house of representatives and passed the proposed Missouri plumbing bill. The governor has announced that he will sign the bill during the week and then it will become a law. The new measure was drafted by the committee on legislation of the Missouri Master Plumbers' Association and by this committee presented to and pushed through the legislature. President A. Zertanna, of St. Louis, and William Daly, of Kirkwood, were the chief workers before the legislature. This bill is designed to apply in all counties of more than 80,000 population, which means all in the state with water and sewerage facilities. It requires the county boards to appoint a plumbing inspector and makes provision for the ways in which installations are to be made. The state heretofore has been without a plumbing or sanitary code in the rural districts, small towns and villages, and it was possible to make installations in any sort of haphazard way except in the large cities, some ten of which had plumbing codes. The new bill does not prevent cities from making their own plumbing codes, so long as none of the provisions of the state code are omitted, and as many additional provisions as desired can be inserted in purely local bills.

Kansas City and Vicinity.

The Master Plumbers' Association of Kansas City, Mo., heard reports of the Missouri state convention, at the meeting on Tuesday evening, March 20th. C. L. Smith, of Kansas City, secretary of the state association, made a detailed report. Other members who were in attendance at Springfield, gave side lights and expressed their ideas of the good that the convention did. The entire membership of the Kansas City association—and especially those that attended this local meeting—is therefore deriving benefit from the state meeting.

The Women's Auxiliary of the Kansas City Master Plumbers' Association held its annual luncheon at the Hotel Baltimore recently. Including guests, twenty-two were present. Mrs. E. D. Hornbrook was toastmistress, and gracefully introduced the several speakers who responded to toasts. Following the luncheon a short business session was held, presided over by Mrs. Arthur McKinley, president of the Auxiliary. The other officers of the organization are: Mrs. Louis Enggas, vice-president; Mrs. W. H. Powder, secretary, and Mrs. D. E. Allison, treasurer.

Jorgensen & Brink, of 3110 East Fifteenth Street, have been awarded the plumbing and heating contract for two 24-room apartments; also the contract for the six-apartment flat in the 3300 block on Olive, and the six-apartment flat in the 3400 block on Park, and the plumbing contract for ten bungalows in Highland.

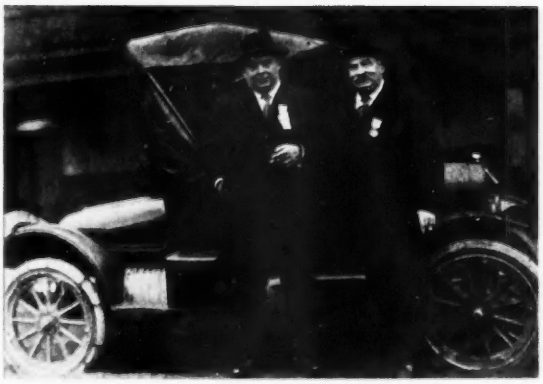
The Archer Plumbing Co. has moved its business from 3842 to 3904 Prospect Avenue.

Ohio

Cincinnati and Vicinity.

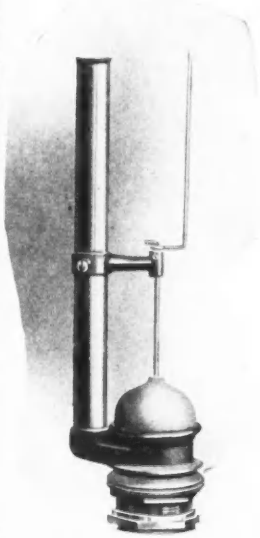
The Cincinnati board of education is planning to have a considerable amount of work done on the public schools, not only in new construction, but in repairing and remodeling old buildings. Business Manager C. W. Handman has advertised for bids for remodeling nine buildings, principally for the purpose of making them fireproof, but incidentally plumbing, heating and ventilating work is involved. Vacuum cleaning systems are also to be installed in several buildings. Bids will be opened for this work on April 9th. Plans and specifications are in the hands of the board.

One of the most pretentious apartment buildings in the Hyde Park district is to be constructed by George C. Harris on Michigan Avenue, from plans which are in



Philip Haas and R. B. Schneider, both of Dayton O.—From "Domestic Engineering" Photo, taken at the Ohio Master Plumbers' recent Convention, in Springfield, O.

JAMACO
Douglas Pattern Flush Valve



—the valve with the perfect seat.

So constructed as to give long, continuous, satisfactory service.

Seat conforms to ball, which adds to wearing quality and insures long life to the ball.

Every valve tested under a 100-lb. water pressure.

Your jobber can supply you.

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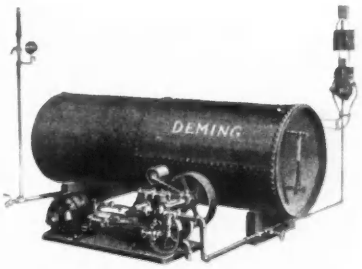

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GENERAL DISTRIBUTING HOUSES:
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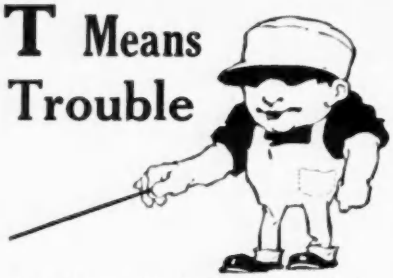
MOUAT VAPOR HEAT

T Means Trouble



The Mouat Graduating Vapor System is a trouble-proof system because there are no mechanically operated or delicately adjusted parts to get out of order and cause annoyance.

VAPOR MOUAT HEAT

The Mouat System is a simple, efficient heating system that gives absolute satisfaction because of the combined operation of several exclusive Mouat features, such as the Mouat Vapor Regulator, the Fractional Radiator Valve, the Safety Valve, etc.

Each of these appliances has exclusive features with which you should be familiar.

Write for Literature.

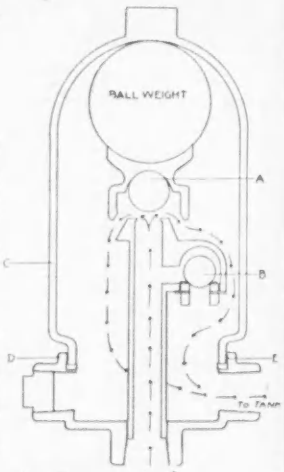
The Mouat-Squires Co.
1246 W. 4th St. Cleveland, Ohio

Simplicity Itself

The working principle of the

Ball Seal Generator

assures perfect results on any hot water heating system.
Seals the system to increase circulation.



Special Features:

No levers, springs, sliding parts or packing.
No sediment to collect on the valve seats.
Ample clearance for the free flow of water.
Simplicity in construction.
Self-cleaning valves—no attention required.
Certain release of sealing valve at 10 lbs. pressure.
Not affected by vibration.
Prevents freezing of expansion tank.
May be located on level with expansion tank.
Assures positive working.

Write for circular and prices.

Ball Seal Generator Company
EASTON, PA.

the hands of Architect C. M. Foster. The building will contain eighteen apartments of four rooms and bath each, and will cost about $50,000.

Architect A. C. Kuball has awarded the contract for plumbing a handsome home in Norwood, for Frank Westermann, to Doyle, Fay & Co.

Samuel Hannaford & Son have awarded the Williamson Heating Co. the heating contract for the Needham residence in Hyde Park, William Jenny securing the plumbing.

The Jordan & Franzen Plumbing Co., of Akron, has been incorporated with a capital stock of $10,000, by Charles Jordan and Peter Franzen.

Akron health authorities recently investigated a group of fifteen so-called "hotels" erected by a construction company, finding them inadequate in regard to sanitation. Each of the buildings is designed to house a number of workers, containing in one large room cooking, eating and sleeping quarters. Changes will be made to meet the requirements of the authorities.

C. A. Bigbee, of the Geo. W. Heiland Co., New York City; E. V. Livers, Fort Wayne Engineering & Mfg. Co., Fort Wayne, Ind.; J. H. Nash, of the Pittsburg Water Heater Co., Pittsburgh, and Ben Lehman, of Dayton, O.—From "Domestic Engineering" Photo, taken at Ohio Master Plumbers' recent Convention, in Springfield, O.

Kentucky

Louisville and Vicinity.

A few days of good weather during the past week has started outdoor operations again, and permits are being taken out in fair volume for building, plumbing, etc. The first three months of the year have been unusually backward for this climate, and outdoor operations are nothing like as far advanced as they should be at this time. However, the next sixty days should prove a very busy period. The plumbers and steam fitters are fairly busy, and are nearly all optimistic.

P. H. Meyer & Co. secured a permit last week for the installation of plumbing in the new home for the Baptist Women's Union Training School, Preston and Broadway. Work on the building has been held back for months on account of cold weather, but should go right ahead now. The contract calls for installation of twenty-two closets, seventeen bath tubs, seventy lava-

tories, six sinks and other fixtures, and is one of the largest fixture contracts placed for some time.

Charged with house breaking and grand larceny in connection with breaking into and stealing plumbing fixtures from the Christian Widows and Orphans Home in Louisville, the defendant was allowed to plead guilty to a charge of grand larceny and take one year in the penitentiary.

Net earnings of the Louisville Water Company for February showed a gain of $1,962.80, as compared with February, 1916, while the total net earnings showed $37,028.58. Expenses for the month showed an increase of $5,000 due to heavy pumping on account of freezing weather and open faucets, and also on account of big increases in the cost of coal and chemicals used at the plant.

Tennessee

Nashville and Vicinity.

The building season in Nashville, and this section, in general, has opened up, and plumbing and heating contractors have a large number of jobs before them to be figured. Among the local jobs of interest are several apartments in which modern plumbing and steam heating will be installed. One of these is for Thomas M. Murray & Co., for which Charles A. Ferguson is architect, and another is for F. W. Hooper, George D. Waller being the architect.

T. J. Mooney & Co. have received the contract for the installation of plumbing in the building of the Little Sisters of the Poor. The contract includes 115 fixtures. The contract for the steam heating has not yet been awarded.

N. S. Jonte has been awarded the contract for the plumbing in the Blackwood Garage, one of the new Ford garages.

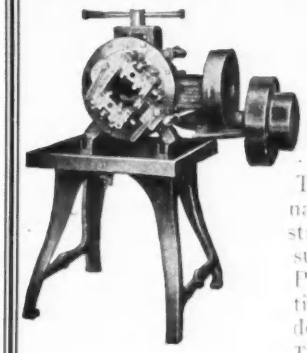
The State Association of Builders' Exchanges held its annual meeting in the rooms of the Nashville exchange on March 12. Officers were elected for the coming year, and there was general discussion of legislation relating to the building trades. A suggested tax on contractors was condemned.

A bill of interest to plumbing contractors throughout the state was passed recently by the Tennessee legislature. The measure provides that all foundries employing twelve or more men must install shower baths. The measure at first exempted only those with eight or less, but this was considered by the Senate to be too rigid for the small concerns. It was passed unanimously, with this amendment, it being recognized that men employed in foundries ought to have a place to clean up before going home.

There is considerable question as to the sanitary engineering bureau being established at the present session of the legislature. A bill has recently been issued with the backing of the State Board of Health, but it is not certain of passage, although this is hoped for. The bill is considerably milder than was originally intended, but it has been pointed out that it will have a better chance of passage and that with a sanitary engineer actually at work, more authority may be given at the next session.

The Tennessee Municipal League has prepared a number of bills for introduction at the present session, among these being one providing for an abutting tax on sewer construction, as now prevails in this state for street work. This will permit the construction of a larger amount of sewers with the same funds of the city.

The mechanical and civil engineering departments of the University of Tennessee are co-operating with the agricultural departments in advising the farmers of the



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The name of Armstrong has ever stood for the best in service, quality and workmanship.

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Send for our catalog of Genuine Armstrong Stocks and Dies, Water, Gas and Steam Fitters' Tools and Pipe Threading Machines.

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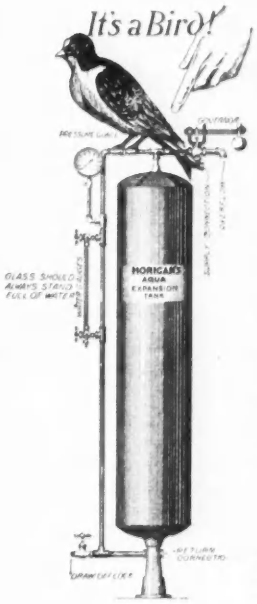
Horigan's Aqua Expansion Tank



Nothing can be more simple than this appliance on a Hot Water House Heating System.

No other System allows such small Mains or Risers to be used.

You need no other Expansion Tank, Generator or Specialty of any kind. Regular goods that you have in stock is all you need.

It makes Hot Water House Heating cost no more to install than Hot Air.

Does all the work alone on a Hot Water job.

Real small pipes (not medium small) cannot possibly be used successfully with other Generators. They are all trying it, but are falling down.

The Expansion must be taken care of, and Horigan's Aqua Expansion Tank takes care of it.

Order One Today

Price, $25.00 Net, F. O. B. cars, St. Joseph, Mo., with full freight allowed to any railway station in the United States.

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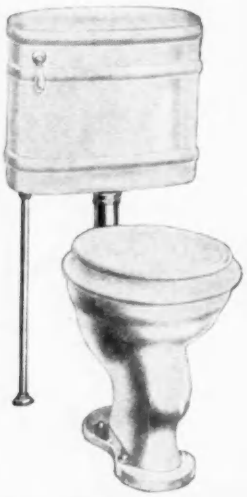
The ball cocks furnished in Pfau's Metal Tanks will work under either a high or low pressure, and are more nearly noiseless in their operation than any other ball cock now on the market.

Pfau's New Big "Mercuroid"

Tank is a new addition to the Pfau line. The little fellow made such a smashing hit we decided to give it a big running mate. The large size "Mercuroid" tank shown is our No. 4-M equipped with a full-elevated ball cock with compound levers and solderless, corrugated copper float. The flush valve is extra heavy and is furnished with a 1¾" overflow tube. Besides the addition of the large size tank to this line, we are also furnishing copper tanks finished in white or in imitation golden oak or mahogany.



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Cincinnati, Ohio

At Your Service — *Write any of Us*

KNOTT MFG. CO. ATLAS SEAT GUARANTEED

Knott Manufacturing Company

6th and Tell Sts., Tell City, Indiana

Representatives

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P. C. Abbott Co., Richmond, Va.
H. Verbeek Co., 175 W. Jackson Blvd., Chicago, Ill.
J. R. Brennan, 422 Common St., New Orleans, La.
Hardy Greenwood, 915 Bush Bldg., Dallas, Tex.
D. L. Hermann, 214 Maritime Bldg., Seattle, Wash.
French-Linforth, 408 Wells Fargo Bldg., San Francisco, Cal.
D. S. Hays-J. L. Denton, 525 calle Belgrano, Buenos Aires, Argentine.
W. A. Forbes, Box 1664, Cape Town, South Africa.
W. L. Edmanson, 156 Lambton Quay, Wellington, New Zealand.
F. A. Winter, 94 Pitt St., Sydney, Australia.
W. H. Ruthning, 356 Quenn St., Brisbane, Australia.

state on various matters within their scope. Among the problems presented to the university are those relating to sanitation on the farm, and the school has been enabled to educate many farmers to the value of sanitary measures.

The School Board of Clinton, Tenn., has awarded a contract to Ernest Taylor, of that city, to install a heating plant in the high school to be erected there. The building is to be of 12 rooms. The plumbing contract will be under the general contract, which was awarded to T. S. Leinart, of Clinton.

The William Slater Electrical Co., recently incorporated with a capitalization of $10,000, at Memphis, will engage not only in an electrical contracting business, but also in plumbing and steamfitting. Milliam Slater, Jessie Cooper, Thomas Jackson and J. L. McRae compose the company.

The city of Humboldt, Tenn., recently voted to issue bonds of $35,000 to erect a high school building. The Business Men's Club originated the plan.

Southern Junior College, owned by the Adventist denomination, has completed plans for a number of buildings at Collegedale. W. H. Gorich is superintendent of construction. About $200,000 is to be invested.

Restaurants and soda fountains in Knoxville have been good customers of plumbing contractors since the city's sanitary inspector recently started the custom of keeping a score card. Plumbing and ventilation are important factors. Not only in the matter of toilets, but also in the arrangement of sinks and cooking equipment are the restaurants marked and a good average is necessary to insure being permitted to remain open.

The city of Centerville, Tenn., is planning to construct a waterworks system.

The Lenox Methodist Church, at Memphis, is preparing to build a new structure to cost $35,000. It will include Sunday school rooms, and will require a large steam heating plant.

Florida

The city of Jacksonville has awarded the contract for installation of plumbing in the Stanton colored school to C. G. Belote, his bid being $8,774.74, while the heating contract was won by Hooker & Lightbody, at $5,198.97. The city plans to construct several additional schools. A bond issue of $250,000, to be sold on March 27, will provide funds to complete the building program.

The Y. M. C. A. of Miami, Fla., is preparing to build a four-story building to cost $110,000. The building will include a swimming pool, showers, etc. H. H. Mundy, of Miami, is architect.

Bonifay, Fla., has voted to issue bonds of $20,000 for waterworks. The city of New Smyrna will vote on a bond issue of $10,000 for waterworks construction.

Alabama

The City Plumbing & Heating Co. is the latest addition to the ranks of the trade in Bessemer, Ala., one of the leading industrial towns of the state. The incorporators are H. H. Milton, J. H. Edwards, D. Lewis Milton, Jr., and David E. Jones. On account of the illness of one of the stockholders, officers have not yet been elected.

The Board of Education of Birmingham is preparing to expend $2,000,000 in the enlargement of a number of the schools of the city, sanitary improvements forming a large part of the proposed work. About five new schools will

be required, while the others will be improved. A new colored high school is planned.

The Lyons Hotel, of Albany, Ala., has had plans prepared for the addition of forty rooms, together with a large number of new plumbing fixtures. Joy & Gallup, of Birmingham, are the architects.

Two Alabama cities plan to install complete sewerage systems shortly, Dadeville and Eudora.

Pennsylvania

Philadelphia and Vicinity.

Wm. J. McCullif, of 60th and Vine Streets, has been awarded the contract to install heating systems in an operation of 50 houses, being built on Old York Road.

W. J. Fricka, of 1328 North 17th Street, has been awarded the contract to install new plumbing and heating systems in an apartment house at 1616 Jefferson Street.

F. Wackenhut, of 443 East Cambria Street, has been awarded the contract to install a heating system in a new building in Kensington, Pa.

H. Rosskof has opened a plumbing establishment at the corner of 40th and Poplar Streets. He would like to receive catalogues from jobbers and manufacturers of plumbing goods.

Frank J. Eustace, of 893 Belmont Avenue, has been awarded the plumbing contract for 74 houses, which are being built in Chester, Pa.

E. C. Struce & Co., of Manayunk, has secured the contract for making alterations in the plumbing system in the Manayunk Trust Co.'s building.

New York

New York City and Vicinity.

With the full use of the new Catskill water system, which will begin about April 1st, water pressures will be increased throughout a large portion of the city and preparations are under way to meet the new conditions. Testing and overhauling of plumbing systems, replacing of old house supply lines and pressure regulator installations are stimulating work among the plumbers in no small degree. The increase in pressure will range from 25 to 35 pounds per square inch above the present average pressures, in certain districts. In others the increase will be about 10 pounds. After June 1st, the water pressure in Manhattan will not be less than 30 pounds per square inch at any point, while in most sections it will be much greater. At many points it will exceed 60 pounds. Except where plumbing is in poor condition, but slight trouble is anticipated as a result of the higher pressures. Wherever possible, the increases will be made gradually, but the water department is notifying all householders to see to it that all house plumbing, roof tanks and shut-off cocks are in good condition and able to withstand the higher pressures.

The Manhattan Association of Master Plumbers has appointed a committee on Ways and Means to consider the matter of trade protection with a view to devising some means of handling this important matter in a lawful manner.

George E. Gibson Co., of 49 East Twenty-first Street, Manhattan, has secured the contract for the heating work in Lathrop Brown's new $100,000 residence at St. James, L. I.

P. Sylvester, of Mineola, L. I., will install the heat-

Ideal
Basin Waste

A New Model which is not only **ideal** in name, but has proven itself **ideal** in overcoming all the objectionable features of the old style waste.

Brass Ground Seats.

Full 1⅝-inch size.

Improved cam movement lift—one of the new and distinctive features.

Inner plunger adjustable to any basin.

Sold to jobbers only. Write for prices.

Manufactured by

Street & Kent Mfg. Co.
549 Fulton Street, Chicago, Ill.

Forget Your Valve Troubles

and incidentally your customers will have no valve troubles to forget, if you use

The Georgia Valve

in every low down tank you install. **Different in construction** from any other valve on the market.

BALL-COCK STEM SUPPORT

Has raised seat, Vim leather washer on cast brass disc fastened firmly to extra heavy stem guided above and below valve seat. Small float holding hinged finger against stem, so when disc is raised, finger engages integral flange on stem, holding it until tank empties. This permits float to drop and valve to reseat.

Write for circular giving full description.

Rundle-Spence Mfg. Company
65 Second Street, Milwaukee, Wis.

Russell Siphon Air and Vacuum Valve

keeps *last section* of radiator hot as well as the first.

Absolutely automatic.
Non-adjustable.
Expels all air and prevents its return.
Will not leak steam or water.
Made of highest quality steam metal and phosphor bronze. Will outlive the heating plant.

Send for Free Sample.

W. A. Russell & Company
63 W. 37th Street
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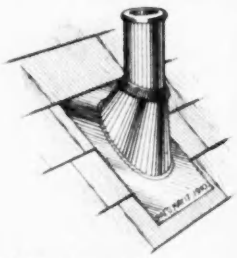
The "Simplex"

Adjustable Galvanized Iron and Copper

Roof Flashing



Perfectly adjustable to any pitch of roof from 50% to flat. With all its simplicity the most durable and efficient flashing made.

"Your mechanical eye will tell you so."

Your Jobber has it

SIMPLEX SALES COMPANY
313 S. Clinton Street CHICAGO, ILL

McShane Bell Foundry Company

Manufacturers

High Grade Plumbers' Supplies and Brass Goods

"McShane" Compound Lever Ball Cocks and Flush Valves.

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U. S. A.

Do You Get This?

You should, because it is right.

The **Clean Sweep Traps** are the Simon-pure, Regular-guy in Trapdom.

It is the acid proof trap for laboratories and lavatories.

It has them all panned, in Lead and Brass.

DETROIT SANITARY SUPPLY CO.
SOLE MANUFACTURERS
Second Ave. & Antoinette St. - - DETROIT, MICHIGAN

ing work in a new residence at East Williston for G. R. Latham.

W. O'Connor, of Hempstead, L. I., has the contract for the plumbing and heating work in a new garage, stable and cottage for R. F. Almiral, on Fulton Street.

C. Morganweck, of Bronxville, has the contract for the installation of plumbing and heating systems in the new club house of the Oak Ridge Country Club, of Scarsdale.

The Bayridge Heating Co., of Brooklyn, will do the heating work in a new garage at Tyndal Street and Rockton Place, Jamaica, for A. I. Nann & Son.

Louis Frisse, of Brooklyn, has the contract for the plumbing work in the addition to the Swedish Hospital, on Rogers Avenue.

W. G. Cornell Co., of Manhattan, has been awarded the plumbing and heating contracts on the new $1,500,000 office building to be erected at Madison Avenue and Forty-fifth Street.

Robert Miller, of Southampton, L. I., will do the plumbing work in C. A. Sabin's new $300,000 residence on Golf Club Road.

T. F. Murphy, of 196 Columbus Avenue, Manhattan, will do the plumbing work in the American Can Co.'s new factory and garage in Brooklyn.

J. P. Blair, of 349 Park Avenue, Manhattan, has the contract for the plumbing work in B. G. Work's new residence at Oyster Bay, L. I.

John F. Collins, of Yonkers, will install the plumbing in a new $20,000 residence on North Broadway, for V. M. Earle.

A. J. Hendel & Co., of Jamaica Avenue, Woodhaven, L. I., will do the heating work in a new residence on Diamond Street for W. A. Dein.

F. Homan, of Far Rockaway, L. I., has the contract for the plumbing and heating work in Charles Brower's new residence at Woodmere.

The Johnston Heating Co., of Manhattan, will do the heating work in Thonet Bros.' factory addition on West Thirty-sixth Street.

Lasette & Murphy, of Manhattan, have the contract for plumbing, and E. Skannell, of Bronx, that for heating in a new $400,000 apartment operation at West End Avenue and 104th Street.

D. Friedman, 844 Sutter Avenue, Brooklyn, has secured the heating contracts on six new residences on Eighteenth Street.

Woolley Bros., of Jamaica, L. I., will do the plumbing work in the Garden Country Club's new home at Garden City.

N. Nehrbauer, of 580 Ninth Avenue, Long Island City, is doing the plumbing and heating in a new store and apartment building on Steinway Avenue for Charles Siegel.

Other Cities in the State.

Daniel Halloran, of Kingston, celebrates the golden anniversary of his business career this year. Fifty years ago he came to Kingston from New York City and established the plumbing, heating, sheet metal and hardware business, which bears his name and stands as a monument to the pioneer spirit of those older days, at 57 East Strand Street. He knows how to talk interestingly of the Rondout section and the building of the West Shore Railroad.

Schick & Taylor Co., of 20 Liberty Street, Poughkeepsie, has the contract for the heating work in a new residence for Robert Dixon on Hooker Avenue.

J. J. Moraney, of Pleasantville, will install the plumbing system in a new residence for Dr. J. McGurdy.

H. W. Lehrens, of Suffern, has secured the contract for the plumbing, heating and sheet metal work in the addition to A. H. Schroeder's residence.

Gilbo & Swartz, of Fort Henry, have the plumbing contract for the new high and grade school in that town. The heating work will be done by Johnston Heating Co., of New York City.

R. T. Ford Co., of 206 South Avenue, Rochester, has secured the contract for installing plumbing and heating systems in the new administration, library and demonstration building of the New York State Experimental Station, at Geneva

A. Treaher, of Gloversville, will do the heating and plumbing in a new residence for W. Horwitz, on Fifth Avenue.

Thomas J. Meehan, of Syracuse, will install the heating system in a new theater and store building on Main Street, in Phoenix.

George Kranichfeld & Sons, of 513 Spring Street, Buffalo, will install the plumbing system in a new storage building on Jefferson Street, for A. Criden.

Buffalo Plumbing Supply Co.'s Business Home at 661-669 Fillmore Avenue, Buffalo, N. Y.

New Jersey

Newark and Vicinity.

Tony Pallitto, of 317 Walnut Street, Newark, is doing the plumbing work in a new apartment building, at 91 Nichols Street.

F. & W. V. Engelberger Co., of 157 Jelliff Avenue, Newark, has the contract for the plumbing work in a new public garage at 100-104 Clinton Place, for the Aetna Realty Co. Herman W. Faul, of 419 Grove Street, will do the heating work. The Engelberger Company also has the contract for installing the heating system in a new school building on Morton Street.

The Ford Motor Co. will build a new $1,000,000 factory at Kearny. The architects are Albert Kahn and Ernest Wilby, both of Detroit.

Martin Heating Co., of 45 Clinton Street, Newark, will do the heating work in a new residence on Gould Avenue for N. J. Convery.

Edward A. Walter, of 14 Delancey Street, Newark, will install the plumbing system in the Trantz Co.'s new factory building on Hamburg Place.

E. J. Kern, of 161 Thirteenth Avenue, Newark, has the contract for installing the heating work in a new store and office building at Clinton and Seymour Avenues.

Fred P. Merkel, of Newark, has the contract for the plumbing and heating work in Dolph Mfg. Co.'s factory addition on Emmett Street.

Jacob Martin, of 503 Elizabeth Avenue, Elizabeth, will do the plumbing work in the new bottling work of the Rising Sun Brewery.

The DUNHAM VAPOR HEATING SYSTEM

Conserves coal.
Operates noiselessly.
Requires minimum attention.
Ask for Dunham Bulletin No. 11.

C. A. DUNHAM CO., Marshalltown, Iowa
Branches in all principle cities of United States and Canada

FOR lasting quality and true capacity use "KOVEN" Pure Iron, Double Row Riveted, Galvanized Range Boilers, or NACO Galvanized Range Boilers made of open hearth steel. These boilers may be bought of jobbers everywhere.

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Dole PACKLESS GRADUATED RADIATOR VALVE

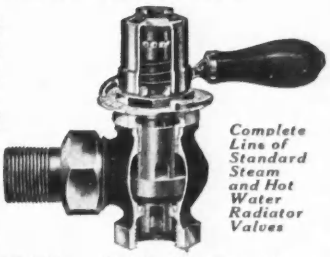
Embodies a new and exclusive DOLE principle by which you can have every degree of opening required in vacuum or vapor steam heating.

This Adjustment is easily made while the steam is on.

Nothing like it on the market.

Furnished with the DOLE **without extra cost.**

Write for new circulars.



Complete Line of Standard Steam and Hot Water Radiator Valves

THE DOLE VALVE CO. 208 No. Fifth Ave., Chicago

"V&K" PUMPS
FOR DOMESTIC WATER SUPPLY
WATER MOTOR PUMPS-ELECTRIC MOTOR PUMPS
SUPPLYING RAIN WATER FOR EVERY HOUSEHOLD USE
SOLD BY ALL JOBBERS IN PLUMBERS SUPPLIES
CORRESPONDENCE INVITED
THE VAILE-KIMES CO.
DAYTON, OHIO

SMOOTH-ON JOINTS
TRADE MARK REG. U.S. PAT. OFF.
SMOOTH-ON
IRON CEMENT No. 5
For making hub joints on cast iron soil pipes, gas and water mains.
EASY TO APPLY
Difficult joints quickly and easily made.
For sale by supply houses.
Send for our illustrated instruction book.
SMOOTH-ON MFG. CO., 570 Communipaw Ave. JERSEY CITY, N. J.

Eagle All Lead Roof Flange
LEAD PIPE
Length, 6 inches
Diameter, 4½ inches
SIZE OF APRON
15 inches Square
Made in Angles, 45 deg., 22½ deg. and Straight.
No Caulking To Be Done
Joints Lead-burned—No Solder Used
Flexible Adjustable Economical
Write for Circular and Prices.
Manufactured only by
The Eagle-Picher Lead Co.
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Efficiency
The rapidly increasing demand for
The Boston Grease Trap
is due to its superior features.
Prevents clogging of pipes by separating and retaining all grease from waste water.
Easy to remove grease through the spacious handhole.
Furnished either round or square.
Price reasonable.
Write for particulars.
R. Estabrook's Sons
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Get your wants into the searchlight of the Classified Columns of
"Domestic Engineering"
If you are seeking a better position, looking for competent help, want to sell your business, form a partnership, buy or sell second-hand machinery, a *Classified Advertisement* will put you in touch with the right parties.
Try It.

Other Cities in the State.

At its last annual election The Upper Montclair Business Men's Association selected Joseph A. Durr, one of the pioneers in the plumbing business in that section, for its president. Mr. Durr is public-spirited and has always viewed business from the broader commercial standpoint. He is one of the founders of the Business Men's Association and served as vice-chairman during its first year in 1914. We said he is a pioneer master plumber, though he is also one of the few in his city who can lay claim to being a pioneer business man. He opened his plumbing business back in 1897, and during the twenty years that have passed since then it has ever been his aim to keep a pace or two ahead of commercial and community progress. He understands his own business thoroughly and now he is charged with the duty of guiding the commercial progress of the whole town, and he'll do it successfully, too.

H. J. Babcock, of Caldwell, will do the plumbing and heating work in the new municipal building, jail and fire house, in that city.

Bids submitted for the heating and ventilating in the new public school to be erected at Allenwood include those of W. H. Brighton, of Avon, at $970; Andrew T. Van Cleve, of Ocean Grove, $1,109, and Sherman & Tompkins, of Lakewood, at $1,172.

William Beck, of Englewood, has the contract for the plumbing and heating work at the new Priory of St. Cecilia's Church.

John Collins, of Passaic, will do the heating work in a new apartment and store building at Garden and Main Streets, for Mrs. Headly.

Low bidders on the plumbing and heating work for the new high school at Ridgefield Park, are John Boyle Plumbing Co., of New York City, on plumbing, and F. P. Merkle, of Newark, on heating.

Massachusetts

Boston and Vicinity.

The master plumbers of Massachusetts have won a decided victory in their opposition to "Senate Bill 289," which would have made a change in the present membership and method of operation of the state board of examiners of plumbers. The legislative committee on consolidation of commissions, which had the bill under consideration and held several hearings at which representatives of state and local master plumbers' associations voiced their objections, has reported recommending that the bill be referred to the next general court.

Members of the Master Plumbers' Association of Boston and Vicinity listened to an interesting talk on office methods at their meeting on March 13, the speaker being C. Oliver Wellington, a member of a well-known Boston firm of certified public accountants. He gave the members many valuable tips on office routine and those who attended felt well repaid.

An invitation has been extended to Boston master plumbers to attend a meeting of the New England Section of the National Commercial Gas Association at the Boston City Club on the evening of April 27th, at which Elmer S. Stack, of Boston, is to read a paper on "The Desirability of Co-operation between Plumbers and Gas Companies in the Merchandising of Gas Hot Water Heaters." Many are planning to attend.

The new state charter, recently issued to the "Master Plumbers' Association of Boston and Vicinity, Inc." has

been framed and now hangs in a conspicuous position in the headquarters of the organization at 166 Devonshire Street. The plan of having an office devoted exclusively to the association is proving a great convenience to the members of the organization, who have access to the rooms at any time. Files of "Domestic Engineering" and other trade publications, the latest catalogues of the principal manufacturing and supply houses, and many valuable reference books are available, and there also is ample accommodation for business conferences or social chats.

E. C. Kelly, of Roxbury, Boston, has the contract for plumbing and heating in a new screen house to be erected in Winchester, for the Beggs & Cobb Tanning Co.

George H. Taylor, a prominent master plumber and association member of Wakefield, has been elected a member of the board of selectmen of his home town.

The W. J. Hyland Co., of Springfield, has secured the contract for plumbing in connection with the new factory building for the William Carter Co., on Morris Street, Springfield.

M. J. Duggan, of Holyoke, has been awarded the contract for heating a new house on Northampton Street, for Mrs. Mary W. Owen.

Contracts for work on the new isolation hospital buildings at Holyoke, have been awarded, the heating to the Holyoke Supply Co., for $6,225, and the plumbing to M. T. Doherty, of Holyoke, for $3,647.

On account of the failing health of Sumner C. Hoisington, junior member of the heating firm of Charles F. Hoisington & Son, of Lowell, the firm has been dissolved, and the business taken over by Charles F. Hoisington, who will continue it at the old address, 141 Market Street.

The Albert Russell & Sons Co., of Newburyport, has the contract for installing a new heating plant in the Home for Aged Men, at Newburyport.

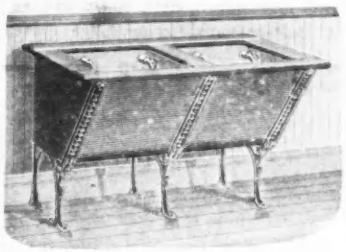
The Holyoke Supply Co., of Holyoke, was the lowest bidder for the heating of the proposed new Chicopee High school at $34,738. J. J. Cotter & Co., of Springfield, was the lowest on the plumbing at $14,860. The contracts will soon be awarded.

Jesse Hall, for nine years employed by C. C. Coates in the plumbing business at Easthampton, has purchased the plumbing and heating business of Charles C. B. Carlton on State Street, Springfield, and will conduct it in the future.

Vermont

The G. S. Blodgett Co., of Burlington, whose plumbing and heating business was established in 1847 and incorporated 45 years later in 1892, has recently been reorganized. The concern occupies a five-story block on Bank Street, Burlington, and carries between 80 and 100 persons on its payroll at all times. During the 70 years of its existence the Blodgett Company has handled many of the largest plumbing and heating contracts in New Hampshire, Northern Vermont and Northern New York. The officers and directors of the new organization are: John S. Patrick, president; J. J. Raine, vice-president; R. L. Patrick, treasurer, and R. R. McNail, secretary. John S. Patrick, who continues as active head of the company, has been associated with the organization for 26 years and is connected with a number of other corporations in various lines. Mr. Raine, the vice-president, has been identified with the concern for 30 years, starting as a plumbers' helper and only recently admitted to the firm.

WHAT'S IN A NAME?



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Graham Pottery
is a definite guarantee of quality everywhere.

You can order Graham Wash Trays and Sinks with the assurance of satisfaction which the name carries.

If you have no Graham Catalog kindly write for a copy.

CHARLES GRAHAM CHEMICAL POTTERY WORKS
986-1018 Metropolitan Avenue BROOKLYN, N. Y.

SOMETHING ENTIRELY NEW IN

SILL-COCKS

Semi-Finished, Polished aluminum wheel Style N. Style O—Heavy rough pattern built for service.

STYLE N Both shown in catalog D STYLE O

KINSEY & MAHLER CO. *Peoria, Ill.*

PRICELESS TO HEATING CONTRACTORS

This manual and scale offer a new and simple way of computing radiation in a few minutes, based on the actual B. T. U. transmission. This places at your instant command information and data ordinarily available only to the best heating engineers and eliminates all guess work from your estimates.

We will send manual and scale to any reliable firm on ten days trial, if not satisfied return to us and it will not cost you one cent.

GREENWOOD & O'NEILL, : Princeton, Ill.
Ask your Jobber

See Your Jobber
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"ALL-CAST"
Guaranteed Vitreous China
Closet Bowls and Closet Tanks
Which are manufactured by
THE ALLIANCE COMPANY
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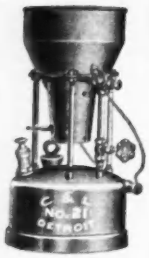

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that it pays to buy good fire pots and torches? C. & L. Fire Pots have stood the test and are sold everywhere under the maker's guarantee. We have devoted more than thirty years and spent thousands of dollars in perfecting our line, but have never experimented at the expense of the user. Jobbers supply at factory price. Send for Catalog—it's free.

No. 21 Fire Pot
List Price
Each $9.60
Discount .....

Clayton & Lambert Mfg. Co.
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Your Metal Problems Solved

We are supplying some of the most prosperous Brass Goods Manufacturers with our

Yellow and Red Brass (H. I. M.) Ingot Metal

Why not join them?
Write for information and prices.

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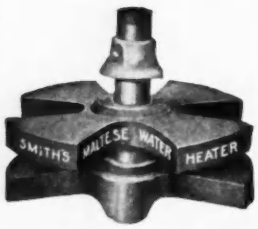
2511 to 2525 W. 21st St. Chicago

Smith's Jointless Hot Water Attachments



are the ONLY ones that give water **circular** motion and that have **no obstruction** to the **natural** movement of the water.

Smith's Maltese Heaters

are made in 8 sizes—can be used in any furnace.

Easy to install. Highly efficient. Thoroughly tested.

Write for Catalog.

Charles Smith Company
Lake and Dearborn Streets Chicago

"Quik - Ope"
Compression Goods

Most reliable line on the market.

Opens exactly on 1-4 turn. Positive action. Valve can't work open and leak. **The improved stuffing box does the trick.**

Made of red metal. Incomparable finish. Triple nickel plated.

Look for the Trade Mark.
Write for latest Catalog.

Made exclusively by
THE HAYDENVILLE COMPANY
Haydenville, Mass. New York City

Established 1845
Makers of Fine Brass Goods

Maine

Governor Milliken, of Maine, has signed a resolve providing for payment to A. L. Dow & Co., of Portland, for extra labor and material furnished in installing plumbing at the State School for Boys, in the years 1905 and 1906.

The town of Winslow, at its town meeting on March 12th, voted to install a heating plant in the grammar school at a cost of $500. The selectmen are George H. Chamberlain, James H. Hodges and Fred H. Ellis.

A permit was granted on March 10th to the Portland Terminal Co., at Portland, to erect a new heating plant on its property west of the Union Station. The construction of the plant will cost about $16,000.

The R. B. Dunning Co., at Bangor, has improved its plumbing and heating establishment in Mercantile Square by building a commodious office at the front and installing modern methods in the office, which were impossible under the previous crowded conditions.

The town of Old Orchard, Me., the beach resort, is considering the erection of a public comfort station. A committee has had the matter under consideration for some time and a special town meeting has been called to hear the report which will be favorable. Old Orchard Beach is visited by thousands of people each summer and it is in great need of a comfort station.

At the annual town meeting at South Bristol, Me., this month an appropriation was voted for installing a new heating plant in the Lincoln school house. The select men are Wilbur F. Bearce, Robert Woodward and Frank Wells.

Connecticut

The Taylor-Flagg Co., one of the leading plumbing and heating concerns in Meriden, has been reorganized and in the future will be conducted under the name of C. N. Flagg & Co., Charles N. Flagg having bought out the interest of Charles S. Taylor. Mr. Flagg is president of the new company, William H. Gleason is vice-president, and W. H. Smith, secretary. Mr. Taylor, who retires from the concern, will take a short rest and later will start again in the plumbing and heating business independently. The Taylor-Flagg company has just completed the biggest year in its history and has more new and unfinished contracts on hand than at any previous time. These will all be finished by the new company, which will continue the business at 27 State Street and retain all of the old employes.

Marcio & Co., of New Haven, is to open a plumbing establishment in Milford as a branch of the New Haven establishment. The business will be located at 6 Daniel Street. Philip Marcio will be in charge.

F. F. Fawcett, of Bridgeport, O., has recently been awarded the contract for the installation of the plumbing system in an $11,000 addition to a high school to be built at Clarksburg, W. Va.

The heating and plumbing contracts for a store and apartment building to be erected at a cost of $5,000 at Morgantown, W. Va., has been awarded to Clyde Brand in that city.

At Henderson, N. C., a large extension to a freight depot will be made within the next month, and local contractors are submitting bids on the work.

California

San Francisco and Vicinity.

While only a small number of big jobs have been reported throughout the state, the smaller jobs have shown a big increase over 1916 activity at this season, and the plumbing trade has been kept very busy. Permits issued during February showed a very irregular tendency. In no case was the total greater than during January of this year, but San Francisco, Los Angeles and Oakland totals were greater than for February of last year. San Diego permits fell short of the total for February, 1916, but this can be attributed to the lack of exposition activity. One interesting feature has been the announcement of state and municipal work to the amount of $155,827, bringing the total on state, government and semi-public work since the fire up to the immense total of $76,000,000, the exposition figures not being included in this amount. While weather conditions have been rather erratic and not conducive to much building, a number of small buildings have been started around the Bay and the interior work on these jobs will soon be started. The biggest job to be announced this past week was the new armory to be erected for the University of California. It is to be a one-story and attic concrete structure to cost in the neighborhood of $150,000 and will be erected at Berkeley, near the Agricultural Hall, recently finished. Still another project of interest to the trade is the approval of the bill introduced in the State Legislature appropriating $40,000 for the installation of a heating plant at Lick Observatory.

Ward & Blohme have drawn plans and are letting contracts for extensive alterations in the building recently completed at the corner of California and Davis Streets, to be occupied by the California Packing Corporation. Plumbing for the entire building is included in this deal.

The assembly has passed a bill introduced by Assemblyman Phillips which creates a "one man" commission for the examination and certification of plumbers.

Other Cities in the State.

The Master Plumbers' Association, of Los Angeles, held its annual meeting the early part of this month, and the matter of forming an organization to comprise all of the architects, contractors, sub-contractors and other interests of the building world into one body was broached. While nothing was settled definitely, this project received favorable consideration. C. L. Peck was chosen president for the ensuing year; R. H. Arnold, vice-president; J. V. McNeil, treasurer; J. A. Crook, secretary and G. S. Tuite, assistant secretary. The association has gone on record as opposed to the retroactive measure introduced in the city council recently which would require that an automatic sprinkler system be installed in all downtown buildings.

A. H. Froom is moving into the new building constructed for his plumbing shop on south Main Street, Santa Maria.

E. G. Henley has purchased Unbarger's plumbing business in Lemoore.

Bids have been called for the overhauling and repairing of the steam heating plant at the Alum Rock Park Bath House, at San Jose, and the installation of a sulphur heating tank. Mangrum & Otter, of San Francisco, were the successful bidders on the pipe to be used for this job.

The Unit System of Heating & Mfg. Co. has removed its shops from Pasadena to Los Angeles.

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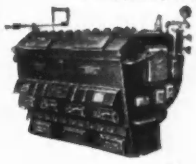

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Size of Flow and Return Steam Mains
Second Edition By JOHN K. ALLEN

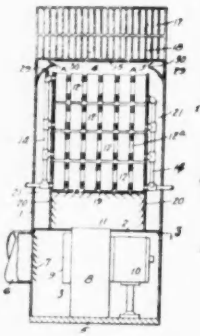
A Useful and Instructive Book

Contains contributions from thirty heating engineers of different cities in the United States.
Also a number of handy tables and much practical advice.
Bound in boards. 4¼ x 6¼ inches.
104 pages; postpaid—Fifty Cents.

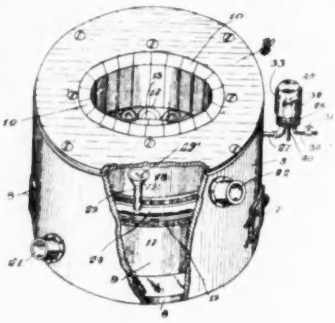
DOMESTIC ENGINEERING
407 S. Dearborn St. - - - Chicago, Illinois

Heating Department.

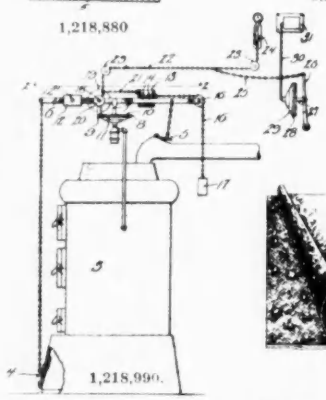
1,218,880. Heating Apparatus. Joseph E. McGinness, Pittsburgh, Pa. A unitary heating and ventilating apparatus comprising a housing having an inlet opening adjacent its bottom and a discharge opening near its top, heating radiators located at an intermediate point within said housing and arranged so that air may be forced through and over the same, said housing being provided with passages around the radiators, means within the housing arranged to draw air from the inlet opening and force it over the radiators and through the passages to the discharge opening, means for controlling the passage through and over the radiators, and means for controlling the entrance to the passages around the radiators, both of said latter controlling means being operable in unison, whereby the relative flow of air over the radiators and through the passages may be regulated.



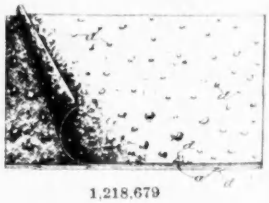
1,218,880



1,218,824.



1,218,990.



1,218,679

1,218,824. Base for Hot-Air Furnaces and Hot-Water and Steam Boilers. Samuel Aikins, Weston, Ontario, Canada, assignor of one-half to Achille A. Pinard, Ottawa, Ontario, Canada. A furnace base, consisting of a combustion chamber, a cylindrical outer wall spaced from the wall of said combustion chamber, the space between said combustion chamber and said cylindrical wall being divided into two separate chambers by a diaphragm, the lower chamber being provided with an air inlet pipe, said combustion chamber being provided with openings communicating with the space between said combustion chamber and said cylindrical wall, the upper chamber being provided with an air intake pipe and an air exhaust pipe,

a water pipe in said upper chamber bent to form a segment of a ring and having a screw cap closure at one end and the other end extending out through said cylindrical wall, an automatic control at the extended end of said pipe, said control consisting of a container screwed to its base and having a shut-off valve inside with water connection to said valve, and an over-flow pipe, said bent water pipe having upwardly extending branch pipes with their upper ends funnel shaped, and oppositely situated doors opening into said combustion chamber.

1,218,990. Draft-Regulator. Anthony B. Ferdinand, Wauwatosa, Wis. A heating-apparatus damper-regulator lever and means controlling tilt of the same coincidental to fluctuations of pressure or temperature in the apparatus, a spindle upon which the lever is fulcrumed, a pair of drums fast on the spindle, a governor slidable on the lever, a flexible device connecting the governor with one of the drums, a similar device leading from the other drum to a station distant from the heating apparatus, means for adjustably supporting the latter flexible device at said distant station, a pull-weight, and a flexible hanger for the weight guided in connection with the lever and attached to said governor, the draw of the weight being opposite the aforesaid flexible device in connection with said governor and the independent adjustment of the governor on said lever serving to determine the degree of pressure or temperature at which the lever-tilting means may become effective.

1,218,679. Heat-Insulating Covering. Charles R. Manville, Milwaukee, Wis., assignor to H. W. Johns-Manville Company, Milwaukee, Wis., a Corporation of New York. A new article of manufacture of the class described, comprising a sheet formed of a mixture containing fibrous asbestos and particles of corn-cob embedded in and in adhesive engagement with the particles of asbestos, said sheet having relatively thick sheet portions formed by particles of said corn-cob material and the material in which said particles of corn-cob are embedded, and having relatively thin sheet portions intermediate the portions of the sheet in which the particles of corn-cob forming part of said relatively thick sheet portions are contained.

Plumbing Department.

1,218,636. Soldering Iron or Copper. Claude M. Edwards, Galveston, Tex. An iron or copper comprising a tank, a pipe connected at one end with the tank, a head connected at the other end of the pipe, said head having a central opening, and a valve carried by the head and located in alinement with said opening, a coiled rod connected with the tank and the head, the said rod having an intermediate convolution which is of greater diameter than its terminal convolution; a shell connected with the head and a copper connected with the shell.

1,218,755. Stationary Washstand. Edwin P. Gaylord, Rochester, N. Y. The combination with a stationary wash basin having a discharge opening above the bottom and a passage leading from said opening to a point below the bottom, of a hollow standard supporting the basin and constituting a discharge with which the aforesaid passage communicates, an inlet pipe arranged within said standard and extending to the bottom of the basin so as to direct a flow of water upwardly from the bottom in a vertical direction, a valve controlling the inlet pipe and foot operated means at the base of said standard cooperating with said valve.

1,218,793. Flushing-Valve. Frank H. Meiners, Cincinnati, Ohio. In combination, a hollow body with an interior valve aperture and an upwardly facing annular valve-seat around said aperture and with upper and lower openings respectively entirely above and entirely

F. & W. Electric House Pumps

are of large capacity, economical, silent in operation, and easily installed. *Send today for bulletin.*

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¶ Pipe installations cost too much to take chances of failure. QUALITY should be the first consideration.
¶ "NATIONAL" Pipe has unassailable FOUNDATIONS OF QUALITY.
¶ The double page announcement, April 7th issue, will illustrate "NATIONAL" — FOUNDATIONS OF QUALITY. Watch for it!

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TANK IN THE BASEMENT "READING" SYSTEM
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Manufacturers
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PRICE—QUALITY—SERVICE
are all combined in
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ROBERTSHAW MFG. CO
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The standard for 30-40 gal. boilers, and single coil heaters or equivalent. Has ⅜-in. gas openings.

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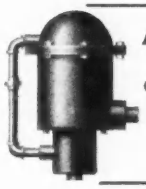

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Costs less to install—saves fuel—gives better service all round.

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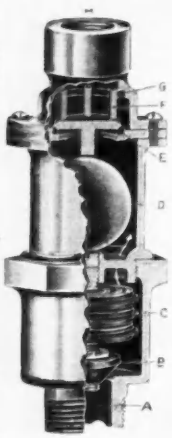

3

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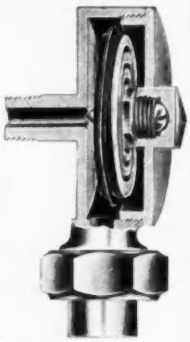
That Need
No
Explanation



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Eliminator,
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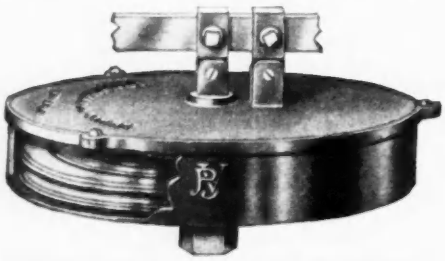
and
Vapor Damper Regulator



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Wyckoff's Water-Proof Steam Pipe Casing

is composed of selected and carefully inspected staves of Cypress. Two casings of Cypress wood, the inner shell, 2 inches thick and an outer shell, 1 inch thick. A ¼ inch dead air space extending entire length of casing between shells, except 4 inches on each end. This results in a combination of non-conductive materials that prevent radiation of heat.

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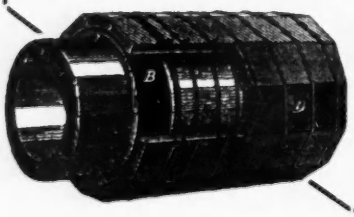
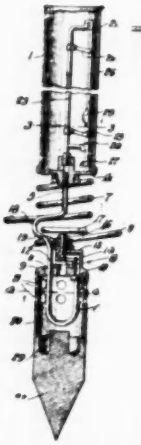


A. Wyckoff & Son Co.
Elmira, N. Y.
Branch Office: 378 Piedmont Avenue, Atlanta, Ga.

below said valve-seat, a hollow extension on said body extending upward from above said upper opening, an inclosure outside said body and extension, communicating with and adapted to confine water in communication with said upper opening, a downwardly tapered valve-plug sliding down in said extension past said upper opening and wedging down in said valve-seat entirely below said upper opening, or sliding up in said extension far enough past said upper opening to have its fall retarded by water below it in said extension, and withdrawn entirely from said valve aperture, and means connected to said valve-plug to oppose the downward sliding of said valve-plug, in such degree that it is only slightly overcome by said valve-plug falling against the resistance of the water in said extension when said valve-plug is raised past said upper opening as aforesaid and there is a continuous body of water communicating through both of said openings and the valve aperture.



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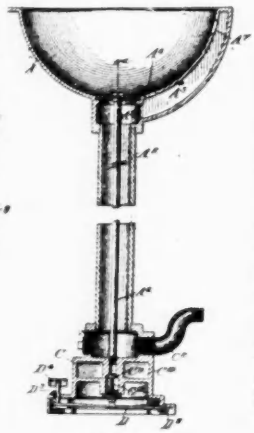

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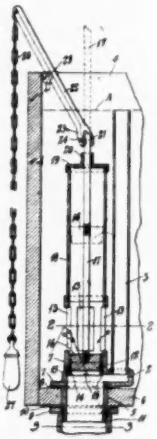


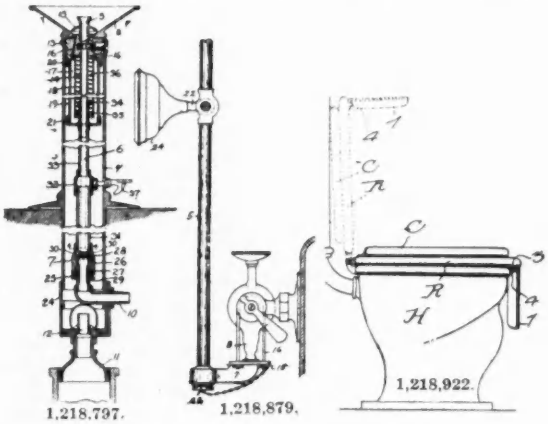
1,218,793.

1,218,797. Drinking-Fountain. Kelso Murdock, Cincinnati, Ohio. A drinking fountain comprising a hollow casing having a drainage port formed in its lower end, a bubbler and a catch basin mounted on said casing, a water delivery nozzle located in the lower portion of said casing, a valve for controlling the delivery of water through said nozzle, longitudinally shiftable piping for actuating said valve and for establishing communication between said nozzle and said bubbler, a pipe communicating with said bubbler and with which said piping is telescoped, a spring for engaging said piping and closing said valve, means for engaging said piping for actuating said valve, and drainage conduits communicating with said basin and disposed within said casing and inclosing said spring and the joint between said piping and said pipe.

1,218,879. Shower-Bath Attachment. August F. Luzzi, Houston, Texas. In a device of the character described a stand pipe, a socket therein, forming a bearing, the inner wall of which is provided with a groove forming a by-pass, a hollow rotatable member fitted in said socket, and provided with an orifice through the wall thereof, a tubular arm integral with and extending laterally from said member and a spray nozzle carried by the free end of said arm.

1,218,922. Shield for Closet-Hoppers. William Louis Bass, Washington, D. C. The combination of a sanitary closet bowl having its entire front exposed, a seat ring mounted above the bowl for movement toward and from the same, said bowl being adapted for use as a urinal when the seat ring is raised and being thus exposed and

prone to become soiled, and a retractable shield plate controlled by the movement of the seat ring and automatically positioned vertically in advance of said bowl when said seat ring is lowered for use, said plate being curved in horizontal section to conform substantially to the curvature of the bowl front and being of a size to cover the upper half of said front to shield the user's



1,218,797. 1,218,879. 1,218,922.

clothes from contact with this portion of the bowl, the front face of said plate being smooth and free of projections to prevent articles of clothing from being caught and torn thereby.

GOVERNMENT CONTRACTS TO BE AWARDED.

Supervising Architects James A. Wetmore, Treasury Department, Washington, D. C., will receive sealed proposals for government work as follows:

Until 3 p. m., March 30, 1917, for the construction, including plumbing and heating, of the United States postoffice at Reading, Mass.

Until 3 p. m., April 4, 1917, for the construction, including plumbing and heating, of the United States postoffice at Chariton, Iowa.

Until 3 p. m., April 9, 1917, for the construction, including plumbing and heating, of the United States postoffice and courthouse at Alexandria, La.

Until 3 p. m., April 10, 1917, for the construction, including plumbing and heating, of the United States postoffice at Cameron, Tex.

Until 3 p. m., April 11, 1917, for the construction, including plumbing and heating, of the United States postoffice at Lancaster, S. C.

Until 3 p. m., April 12, 1917, for the construction, including plumbing and heating, of the United States postoffice at Wahoo, Neb.

Until 3 p. m., April 14, 1917, for the construction, including plumbing and heating, of the United States postoffice at Burlington, Wis.

Until 3 p. m., April 18, 1917, for the construction, including plumbing and heating, of the United States postoffice at East Orange, N. J.

Until 3 p. m., April 26, 1917, for the construction, including plumbing and heating, of the United States postoffice at Fremont, O.

Drawings and specifications may be obtained from the custodians of the different sites, or at the office of the Supervising Architect, Washington, D. C.

Escanaba, Mich.—S. C. Stille has been awarded the contract for the installation of plumbing and heating systems in the new Manual Training School; consideration $5,640.

RELIABLE
Vacuum Heating Equipment

The Universal Trio—

Air-Line
Return-Line
Vacu-Vapor

cover every steam heating requirement.

Before deciding upon the equipment for your next heating contract, write for literature and full information concerning the complete, up-to-date RELIABLE Line.

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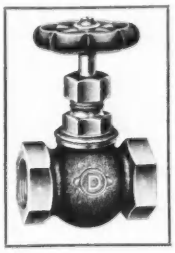
When you want to be sure to have no come backs after you finish a job specify

"Dependable Valves and Fittings"



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Advertisements under this heading 4 cents per word per issue, address included. Send cash with order. To insure insertion copy should be received not later than Wednesday afternoon.

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WANTED—A NO. 1 SALESMAN FOR position as branch sales manager at Philadelphia. Must be first-class man. Union Radiator Company, Johnstown, Pa. 2-10 tf

WANTED—A GOOD HEATING AND ventilating engineer. One who is at present employed preferred. Must give good references as to his commercial and engineering ability and state salary expected. Address Moline Heat, Moline, Ill. 3-3 tf.

WANTED—PLUMBING SALESMEN, calling on plumbers regularly to sell range boilers on commission. Excellent proposition. Only capable, experienced men desired. State territory covered, lines handled, etc. Reply confidential. Pennsylvania Range Boiler Co., Philadelphia, Pa. 3-24; 31/4-7

WANTED—THREE ENERGETIC LIVE wire salesmen are required by a prominent Chicago concern to call on factories, gas and electric light plants and other concerns, to promote the sale of pipe, fittings, valves and kindred materials. Excellent opportunity for men of ability. Positions open immediately. Every co-operation granted. Address 2404, care "Domestic Engineering," Chicago. 3-24

For Sale.

FOR SALE—ONE OF THE BEST plumbing and heating establishments in the state of Oklahoma. Stock will invoice about $4,000. Quick action wanted, owing to other business. Address 2410, care "Domestic Engineering," Chicago 3-24; 31

FOR SALE—PLUMBING, HEATING and roofing business. One of the best locations in Western Pennsylvania. Good reasons for selling. Address 2409, care "Domestic Engineering," Chicago. 3-24; 31

FOR SALE—A WELL ESTABLISHED plumbing and heating business in an Eastern Iowa town of 2,000 population. Address 2406, care "Domestic Engineering," Chicago. 3-17; 24

FOR SALE — PLUMBING, HEATING and sheet metal business. Well equipped work shop, good show room, new building, reasonable rent, good location. Town of 8,000. Excellent chance to increase business. Address 2407, care "Domestic Engineering," Chicago. 3-17 24

Miscellaneous.

SELL YOUR SURPLUS COUPLINGS and fittings. Write us. The A. & J. Mfg. Co., 557 W. Lake St., Chicago. tf

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TREASURY DEPARTMENT, SUPERvising Architect's Office, Washington, D. C., Mar. 14, 1917. Sealed proposals will be opened in this office at 3 p. m., April 11, 1917, for a new plumbing system, etc., in the United States courthouse and post office at Opelousas, La., in accordance with drawings and specifications, copies of which may be had at this office or at the office of the custodian, Opelousas, La., in the discretion of the Supervising Architect. Jas. A. Wetmore, Acting Supervising Architect. 3-17; 24

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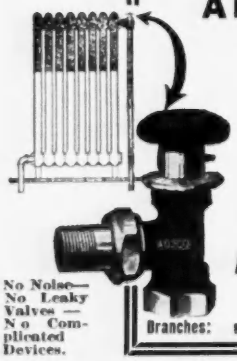
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